



CO<sub>2</sub>

Simplifying Progress

# SRI Investor Presentation

April 2024

# SARTORIUS

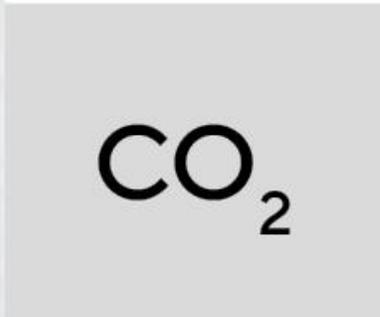
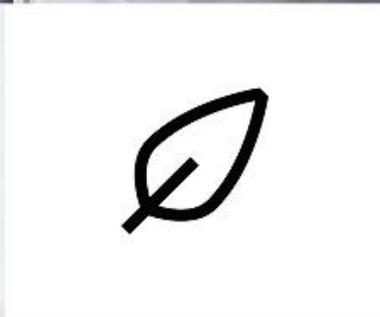
# Agenda

Overview | Mission

Green sustainability

Social responsibility

Governance



# Sartorius at a glance

€ ~€3.4bn  
Sales revenue 2023

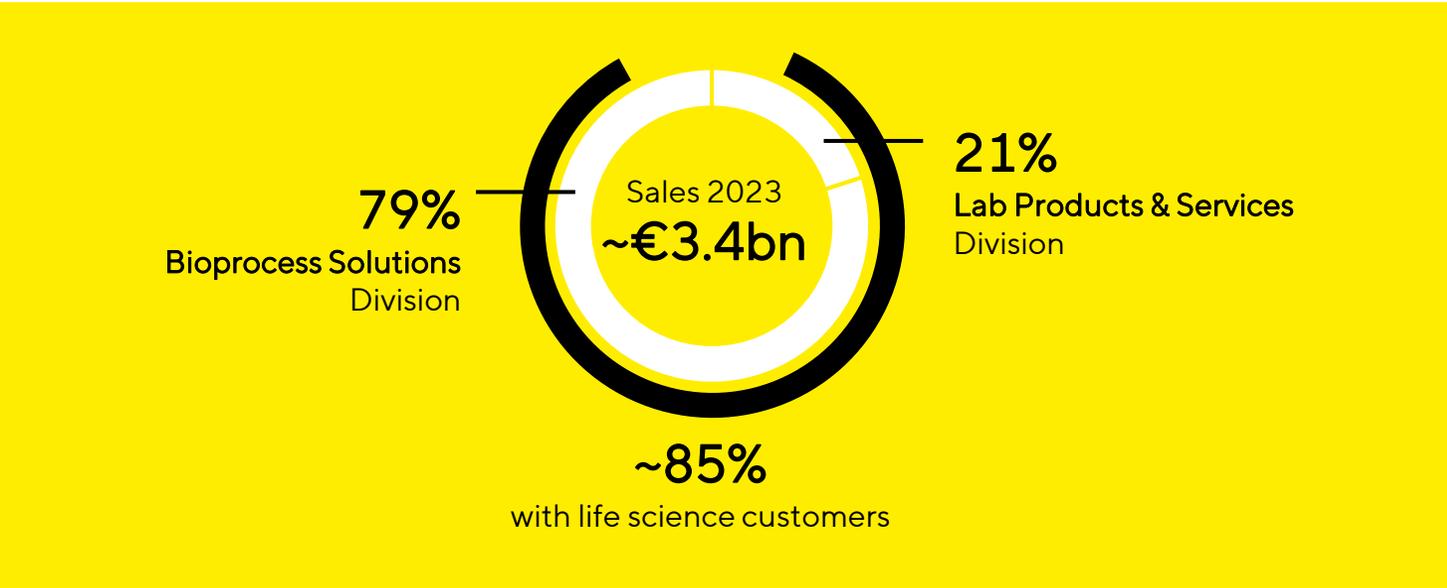
~15%  
Sales CAGR<sup>1</sup> 2013-2023

28.3%  
EBITDA margin<sup>2</sup> 2022

60+  
Locations worldwide,  
HQ in Göttingen, Germany

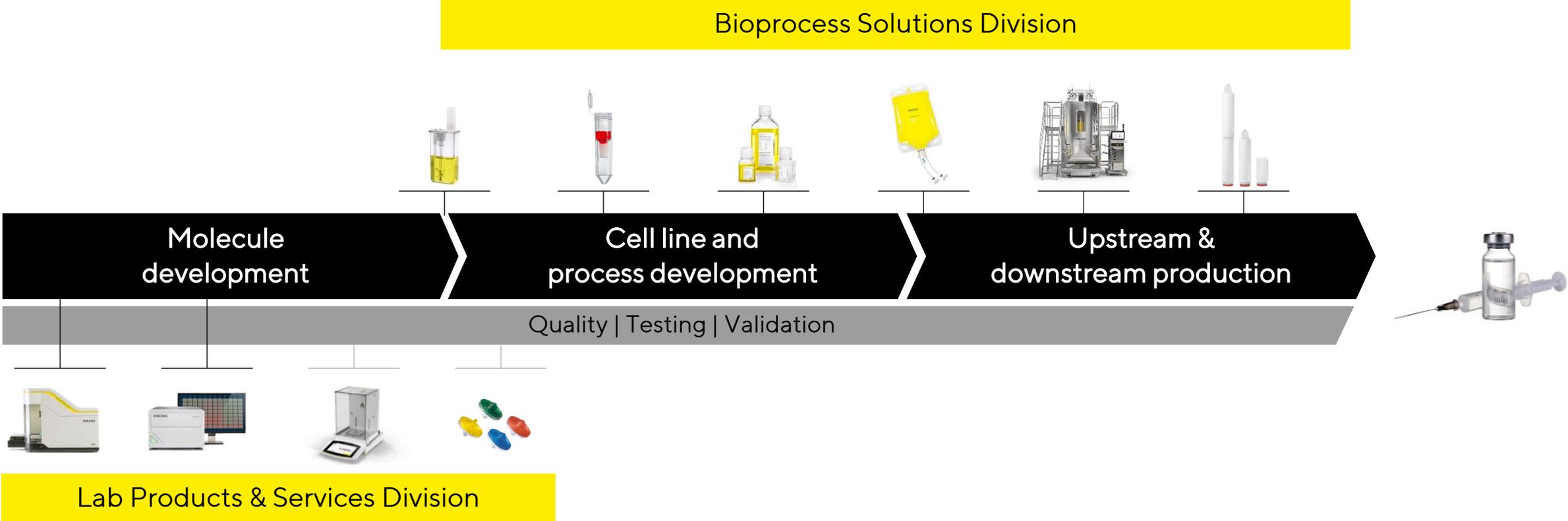
~14,600  
Employees 12/2023

Two divisions with clear focus on attractive biopharma and life science industry

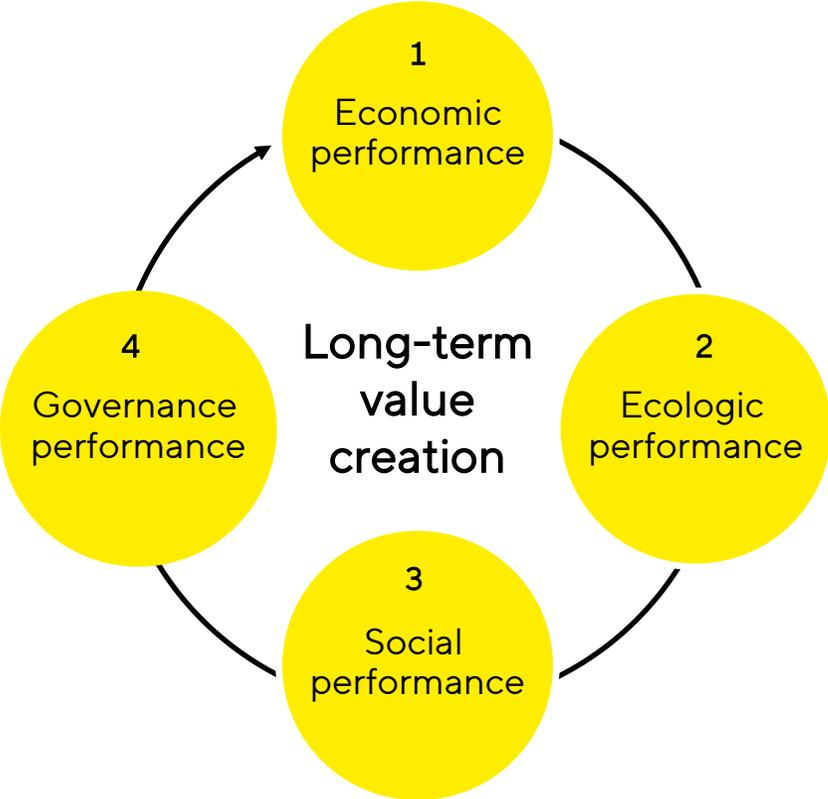


1 In constant currencies 2 Excluding extraordinary items

# Supporting customers from drug discovery to commercial-scale production of biologics



# Long-term value creation by focusing on four material topics



1	<ul style="list-style-type: none"><li>▪ Advance innovation, contribute to medical progress</li></ul>
2	<ul style="list-style-type: none"><li>▪ Protect the environment by reducing emissions, waste and water use</li><li>▪ Assuming responsibility for our products throughout their life cycles</li></ul>
3	<ul style="list-style-type: none"><li>▪ Find and retain employees, provide good working conditions</li><li>▪ Protect health and safety, promote continuous development</li></ul>
4	<ul style="list-style-type: none"><li>▪ Responsible corporate governance and compliance</li><li>▪ Respect for human rights throughout the supply chain</li></ul>

At the core of our business: “Good health and well-being”

**3** GOOD HEALTH  
AND WELL-BEING

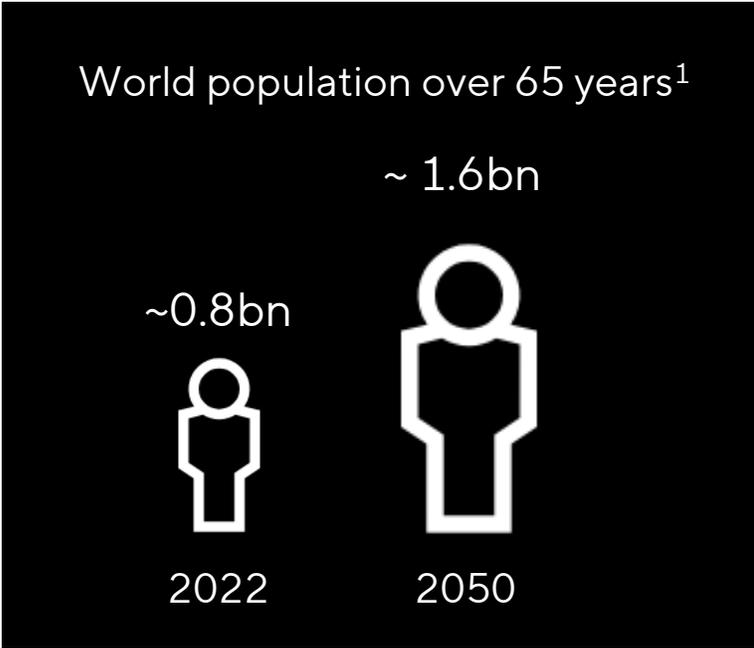


## Our mission

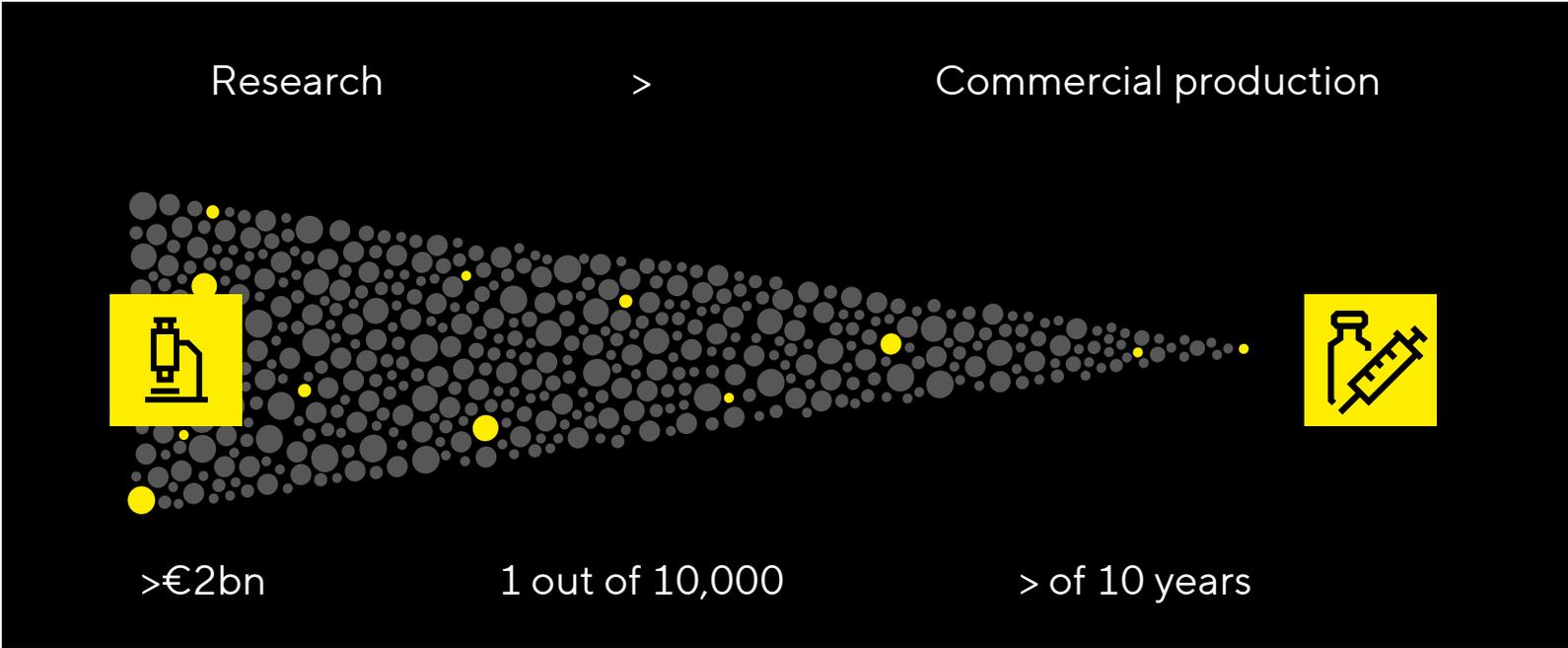
We empower scientists and engineers to simplify and accelerate progress in life science and bioprocessing, enabling the development of new and better therapies and more affordable medicine.

# Health is one of the most relevant global topics

## Growing and aging population



## Development and manufacturing of drugs are time-consuming and costly<sup>2</sup>



1 United Nations: World Population Prospects, 2022 2 Based on data from the Tufts Center for the Study of Drug Development and the Association of the British Pharmaceutical Industry

# The challenge: Many innovative biotech medications are very expensive

## Rheumatism

Monoclonal antibody therapy



~€12,000

Annual cost of treatment in Germany

## Blood cancer

CAR-T cell therapy



~€280,000

Cost per treatment in Europe

## Hemophilia

Gene therapy



~€3.5 mn

Cost per treatment in the USA

# Three drivers for innovation: The key to achieve ESG targets

**Product development**  
in areas of own core competencies



Product launch  
Sartobind® Rapid A

**Acquisitions**  
of complementary and differentiating technologies



Bioanalytics



Downstream processing



Cell and gene therapies

**Cooperations**  
with partners that are leading in areas of future relevance

Advanced materials	3D cell printing technology
Process automation & digitization	Bioanalytics

# Sartorius' technologies enable researchers to achieve results faster, ...

## Example: digitalization and automation of laboratory processes



Incucyte® SX5



iQue® 3



Octet®

- More experiments with lower error rate
- Data and analysis for better decisions
- Shortening time-to-clinic



CellSelector



Saves more than **5** weeks in the selection of cell clones

... to increase yield and efficiency in biopharma production ...

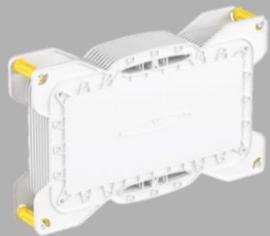
Example: new, innovative bioprocess technologies



CIMmultus®



Downstream processing time reduced by **60%**  
Significantly higher yields of viral vectors required for gene therapies



Sartobind® Rapid A

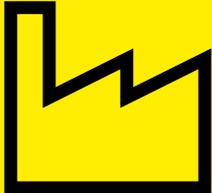


**20x** Higher productivity compared to classical column chromatography  
**>30%** Cost reduction in clinical manufacturing

# A strong lever of impact on green aspects: Our customers' operations



Global GHG emissions in CO<sub>2</sub> equivalents in 2021<sup>1</sup>  
**>50 billion tons**



Of these related to the healthcare sector<sup>2</sup>  
**~4-5%**



Attributable emissions of Sartorius<sup>3</sup> make up  
**~0.025%**

<sup>1</sup> UN Environment Programme „Emissions Gap Report 2022“, preliminary estimate   <sup>2</sup> According to World Economic Forum June 2021   <sup>3</sup> Own calculations

# SU technologies help to reduce water and energy consumption at the customers' sites



Water consumption<sup>1</sup>  
~ -30%



Energy consumption<sup>1</sup>  
~ -30%



Celsius<sup>®</sup> FFT Freeze & Thaw Solutions



Maxicaps<sup>®</sup> Sterile filter



Sartopore<sup>®</sup> Platinum



Flexsafe<sup>®</sup>



Linkit<sup>®</sup> AX

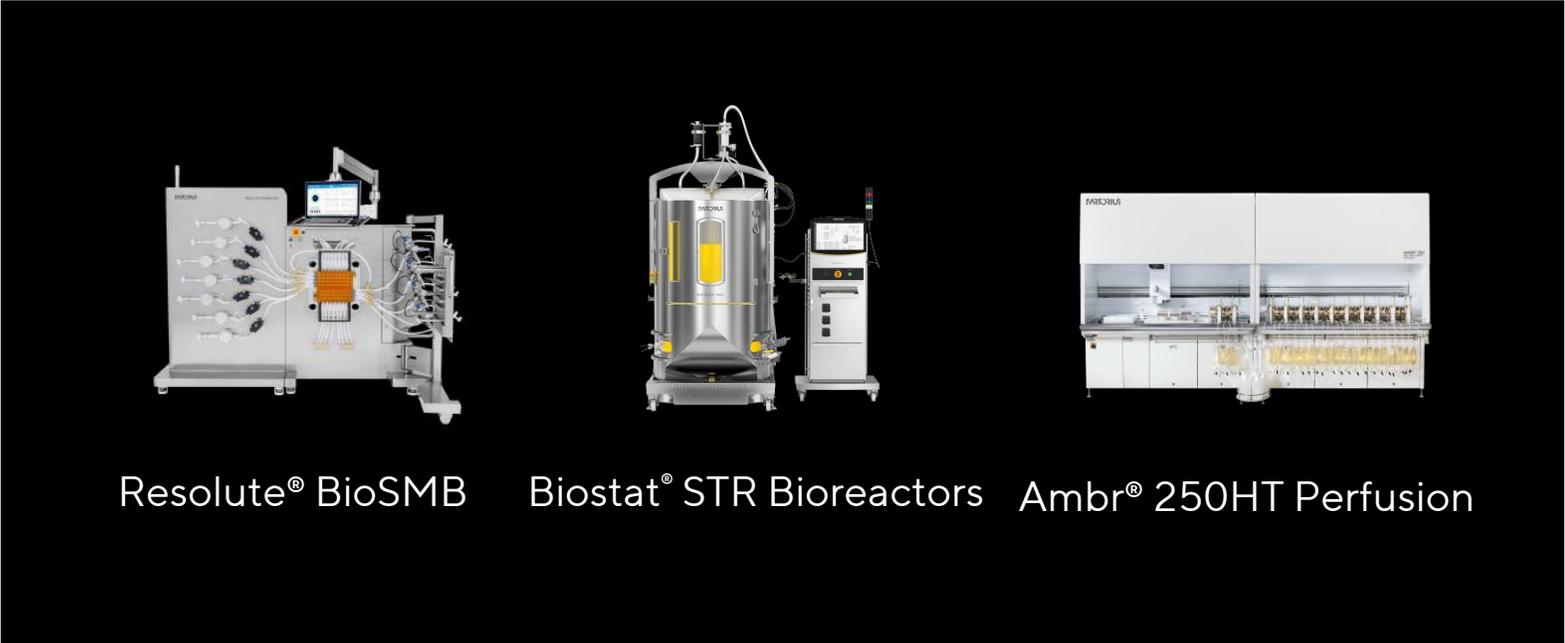
<sup>1</sup> Based on data from Flanagan et al (2011). LCA of a mAb process at 2,000 L scale.

# Process intensification leads to higher efficiency and less eco impact



Process Mass  
Intensification<sup>1</sup>  
**-50%**

$$PMI = \frac{\text{Total raw materials, consumables and water (kg)}}{\text{Product (kg)}}$$



<sup>1</sup> Data from in-house case study: 300 kg/year and 1,500 kg/year throughputs. PMI measured for a traditional stainless steel fed batch process (SS 15kL), and a process intensification scenario (SU dynamic perfusion process with downstream multi-column chromatography). Data was generated using BioSolve modeling software.

# Data analytics solutions support customers in further CO<sub>2</sub> reduction

**Success Story**  
Implementation of Umetrics® Suite data analytics tools at Michigan University helps increase process efficiency and reduces carbon footprint significantly

Phase 1 |  
prevented  
**780**  
tons CO<sub>2</sub>e



Phase 2 |  
aims to prevent  
**10,000**  
tons CO<sub>2</sub>e



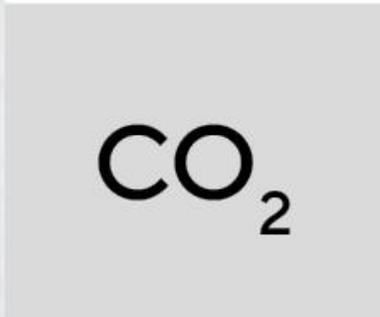
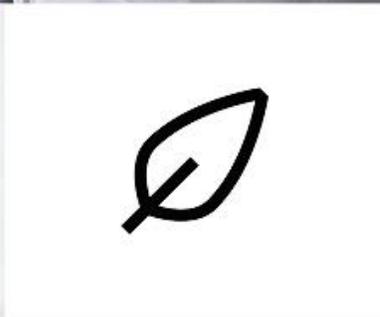
# Agenda

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**Green sustainability**

Social responsibility

Governance





# Sartorius' environmental fields of action at its own operations

**Climate Action**

**13** CLIMATE ACTION


**Materials & Circularity**

**12** RESPONSIBLE CONSUMPTION AND PRODUCTION

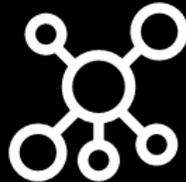

**Water & Effluents**

**6** CLEAN WATER AND SANITATION

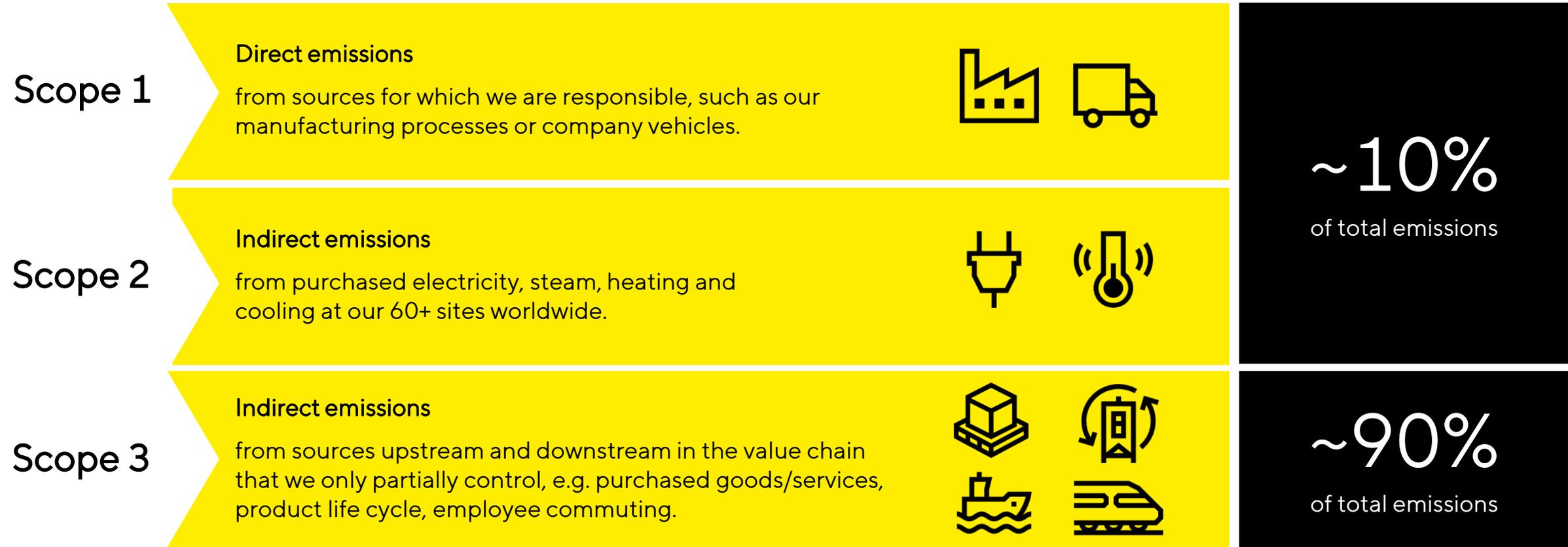

**Supply Networks**

**17** PARTNERSHIPS FOR THE GOALS



# Only a small portion of emissions under own control





# Ambitious mid- and long-term climate targets

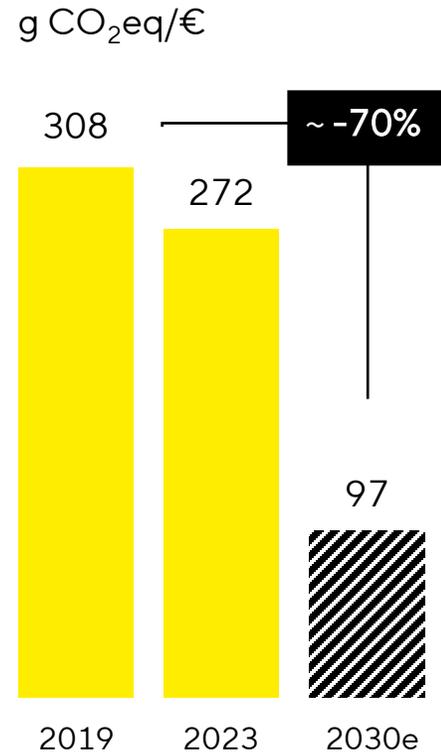
## 2030 mid-term targets

**~10%** p.a. on average reduction of CO<sub>2</sub>eq emission intensity

**Zero** avoidable\* emissions in Scopes 1 and 2

**100%** electricity from renewable sources

Sartorius commits to extending its climate ambition by targets approved by the Science Based Targets initiative.



## 2045 long-term target

# Net-zero emissions

Decarbonization of the entire supply chain in collaboration with suppliers and customers



\*Process emissions from membrane manufacturing are currently considered unavoidable based on available technology.



# Additional sustainability target: Climate neutral by 2045

## Long-term target complements existing climate strategy

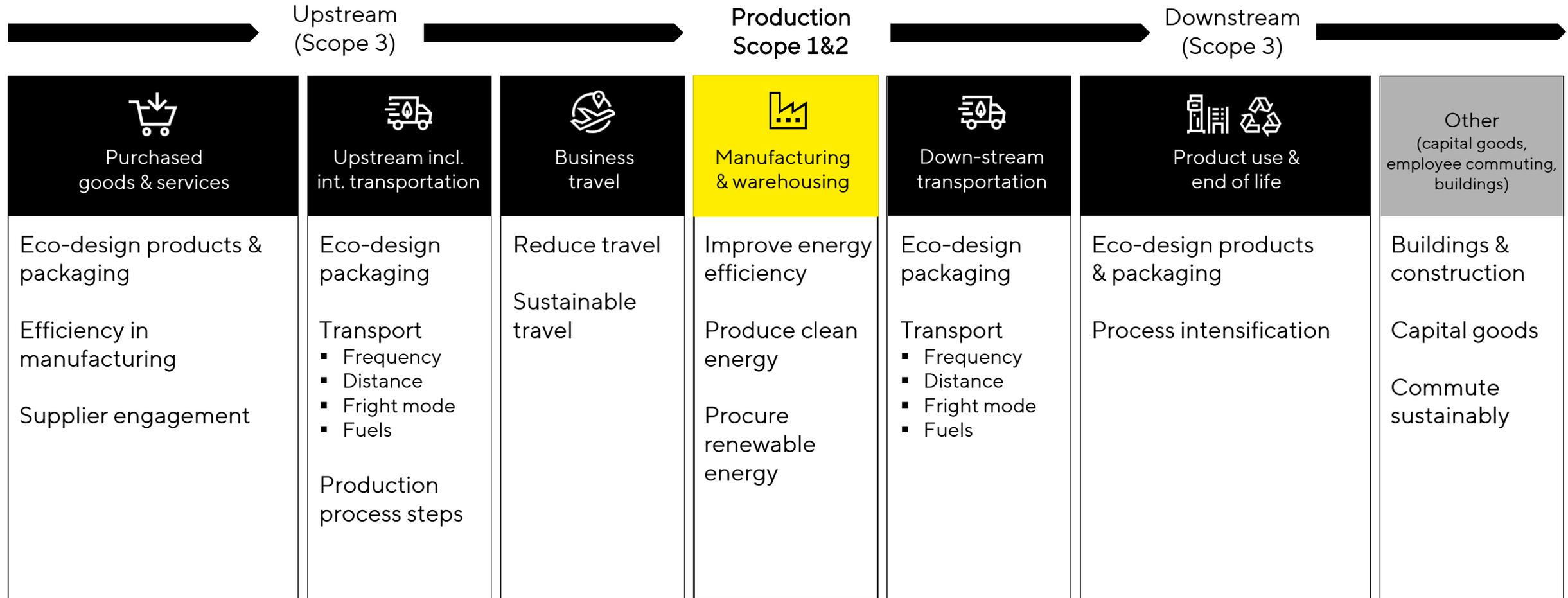
- Decarbonization in collaboration with suppliers and customers
- 100% electricity from renewable sources by 2030
- Electricity from hydropower at German sites in Göttingen, Guxhagen and Ulm since 2021



Sartorius commits to extending its medium-term climate related ambition by targets approved by the Science Based Targets initiative.

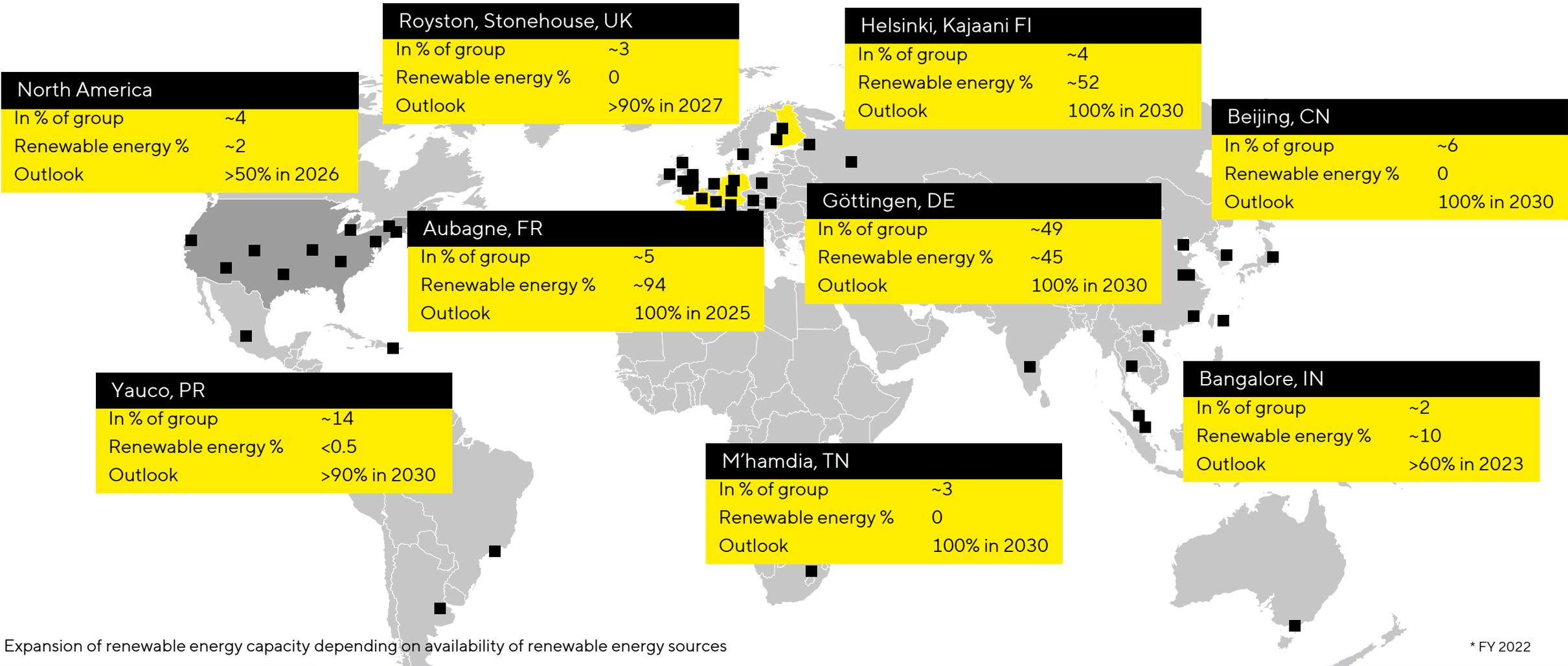


# CO<sub>2</sub> reduction levers across the value chain





# Expanding renewable energy capacity at Sartorius' sites worldwide



Expansion of renewable energy capacity depending on availability of renewable energy sources

\* FY 2022



# Flexsafe®- first film designed for recycling

## A milestone on the way to circularity

- From 20ml to 2,000l, Flexsafe® is the first film in the industry designed for recycling in a standard polyethylene waste stream
- Used in bioprocessing for non-hazardous applications, it can technically be recycled into raw materials with quality equivalent to pristine grades of polymers.

## Partners



# Materials and circularity: Transitioning towards a circular economy



## Our ambitions

We aim to optimize the selection and use of materials to improve our products' environmental footprint.

- Optimize use of resources
- Avoid packaging waste
- Recycle production waste
- Life cycle analysis

## 2030 Circularity targets

>75%

Sales revenue with products designed according to circularity principles

Zero

operational waste to landfill



1 including product and transport packaging

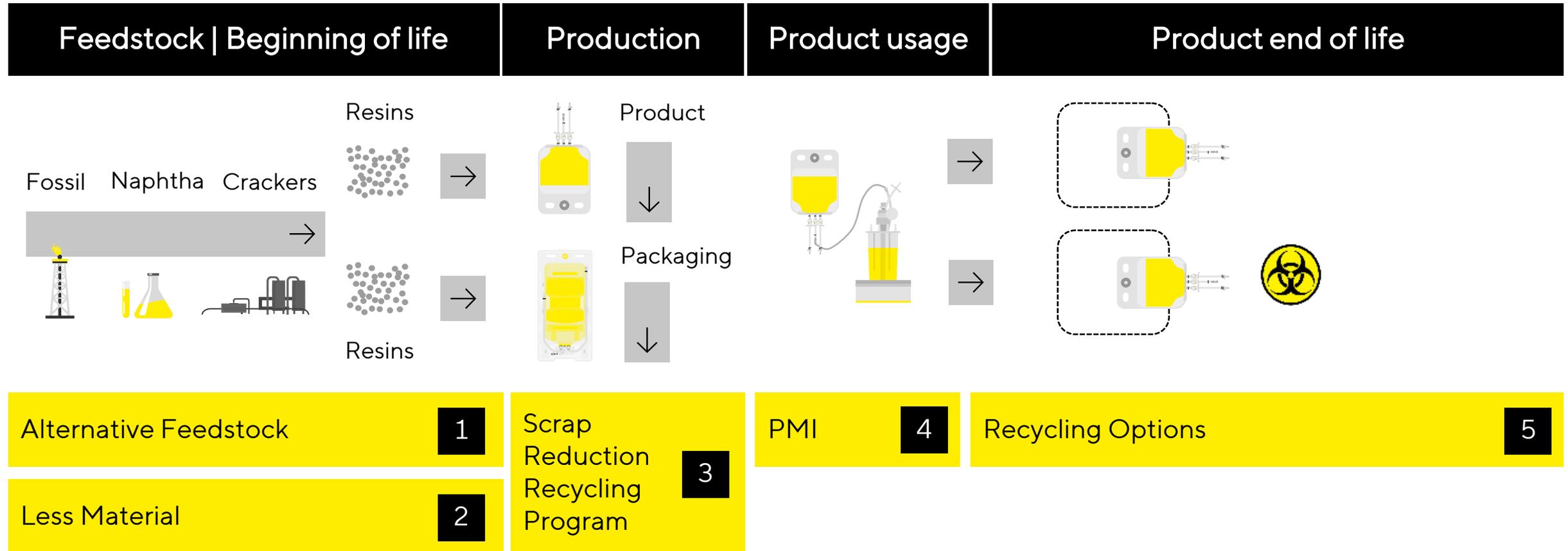
# Circular economy: New, medium-term goals defined



1 including product and transport packaging



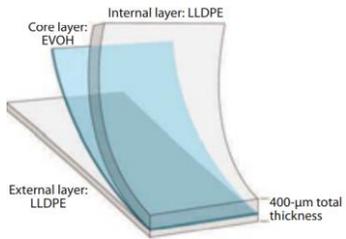
# Current projects regarding the single-use technology life cycle



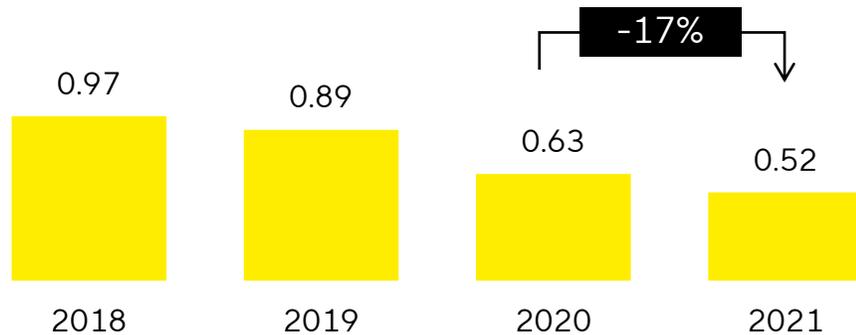


# Initiatives to improve waste management in Aubagne

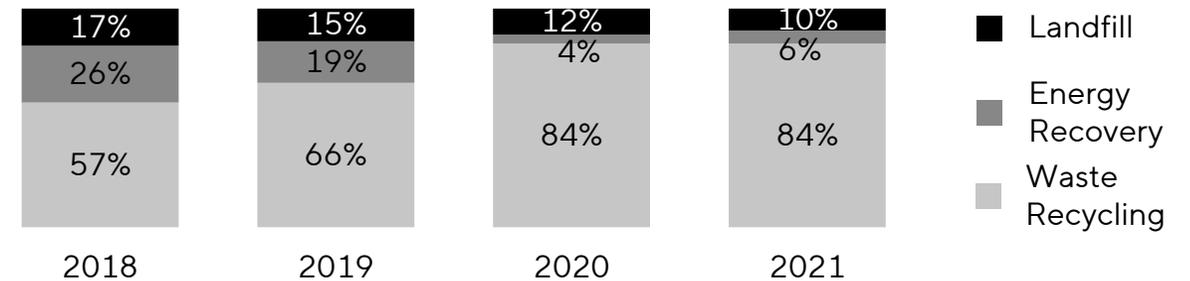
Enhanced film recyclability<sup>1</sup> > Reduced film consumption > Improved waste collection and sorting > Increased waste recycling



Total Waste (t/1000 Units)



Waste Processing



<sup>1</sup> Figure taken from: Vachette, Elisabeth & Fenge, Christel & Cappia, Jean Marc & Delaunay, Lucie & Grellier, Gerhard & Barbaroux, Magali. (2014). Robust and convenient single-use processing: The superior strength and flexibility of flexsafe bags. 12.



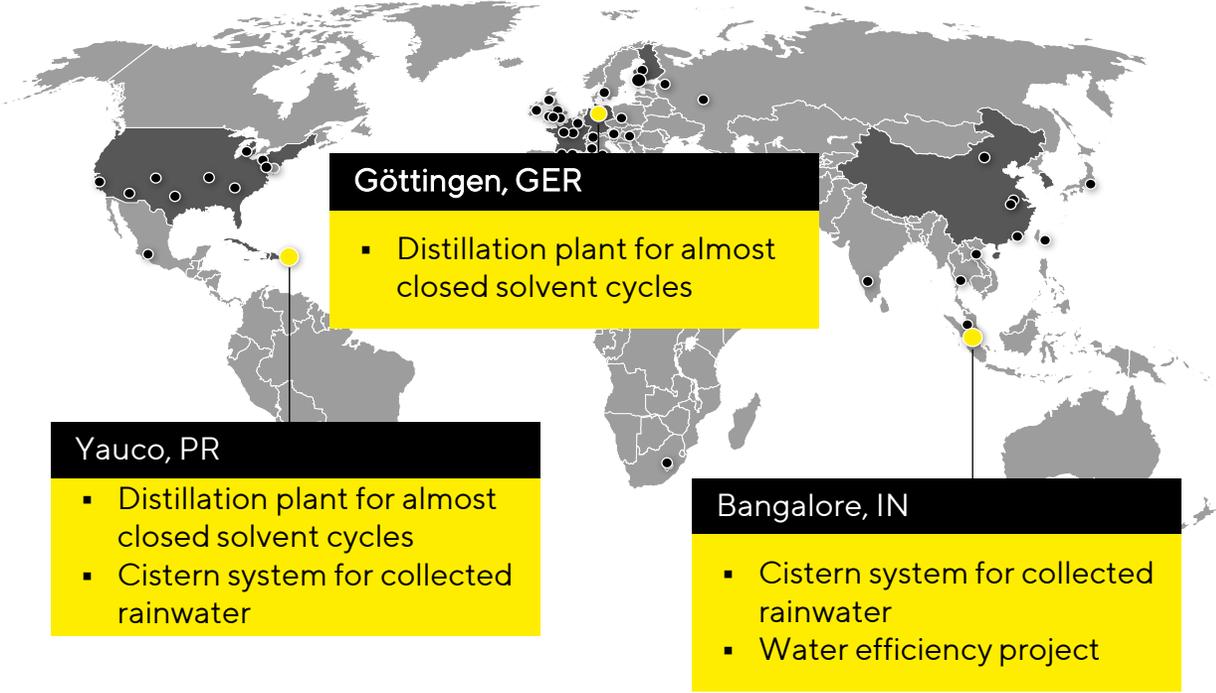
# Water and wastewater: Improve water efficiency in own operations

## The ambitions

- Reduce use of drinking water, increase use of rainwater
- Decrease wastewater, increase water recycling
- Optimization of production cycles with solvents



Water is primarily used in BPS for **membrane production** and **modification**





# Solvent and water reuse at the Yauco plant

4 distillation columns  
Processing capacity: 16,500 kg/day of spent solvent (oldware)

3.9 million kg  
of oldware processed for reuse

11.9 million litres  
of water processed for reuse



90% recovery  
of 2-pyrrolidone (2P) from oldware

98% recovery  
of Isopropanol (IPA) from oldware

Base April 2022



# Supply chain due diligence act: Risk assessment



<sup>1</sup> Coverage in terms of spend as of June 2023

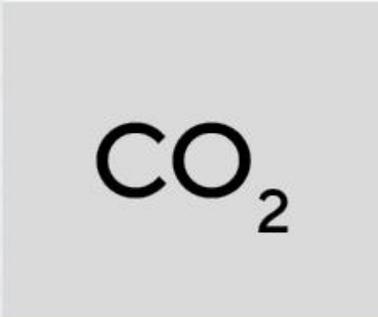
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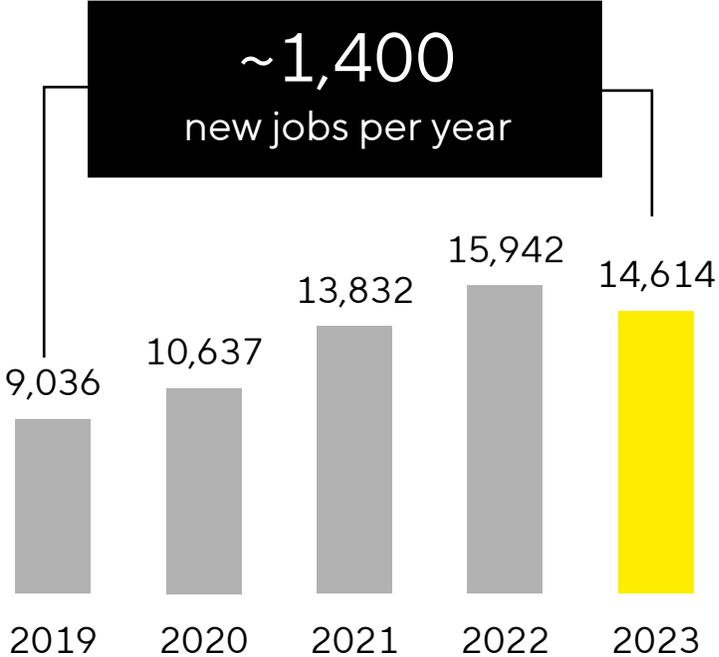


# Strong increase in personnel over 5 years: 62% more employees

After strong team growth, current focus on efficiency

55%

Less than 2 years in the company



Many opportunities to grow with the company



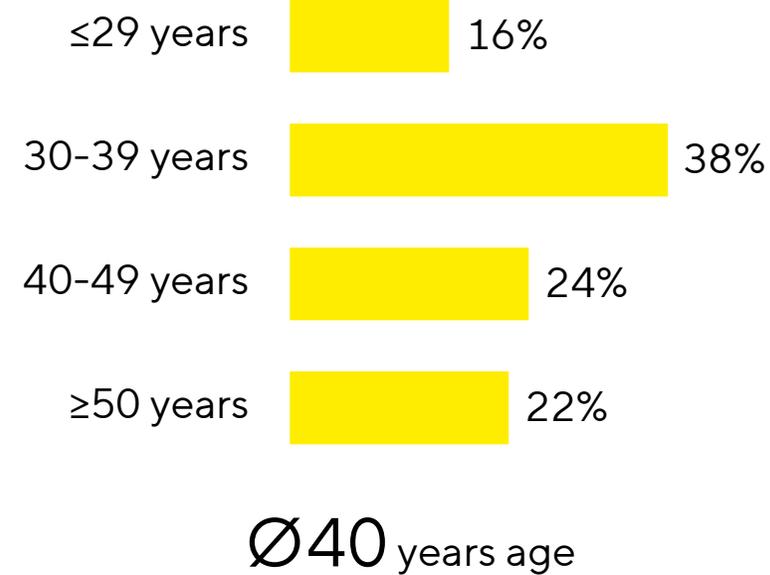
of management positions filled internally

# An increasingly diverse team that brings in a variety of perspectives

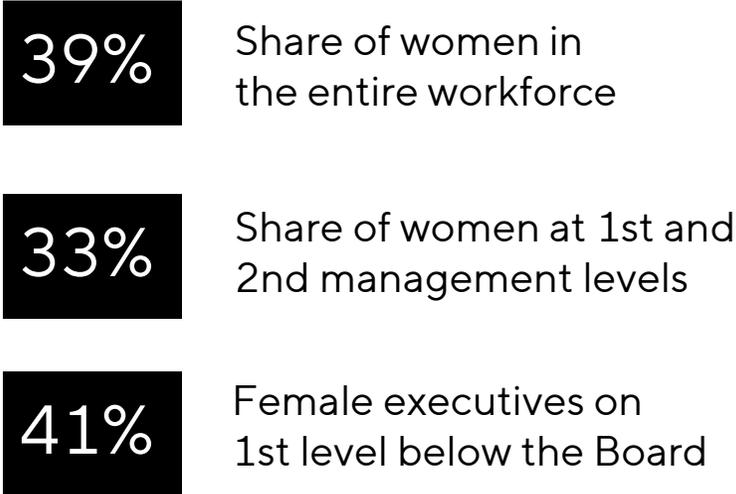
## International workforce



## Balanced age structure



## Share of women at a high level



Goal 2025 1/3

# High employee satisfaction reflected internally and externally

87%

say they contribute to the company's mission

77%

are proud to work for Sartorius

82%

agree that Sartorius respects and strengthens diversity

3.6 ★★★★★☆

glassdoor®

Intern. competitors Ø 3.7

4.0 ★★★★★☆

kununu<sup>®</sup>

DAX40 Ø 3.8

As of Q1 2024



# Promoting science, education and innovation – also beyond our walls

**Cell Culture Facility at Penn State |**  
Supporting groundbreaking research with \$1.5 million



**Life Science Factory |**  
Promoting startups and attract entrepreneurs in life sciences



**LifeScienceXplained |**  
Creating a stage for science communicators since 2021



# Engaged in humanitarian aid and disaster relief globally

**action medeor** provides medical care to humanitarian organizations and health centers all over the world.

## Our latest commitments include

- Support for earthquake victims of in Türkiye and Syria
- Humanitarian aid for the people of Ukraine
- Healthcare support in Guatemala
- Pharmaceutical training in West Africa



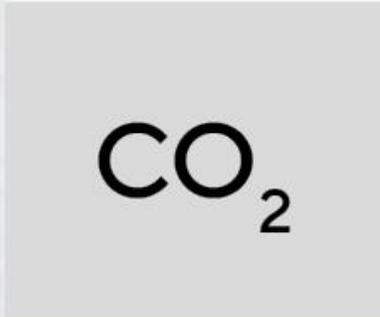
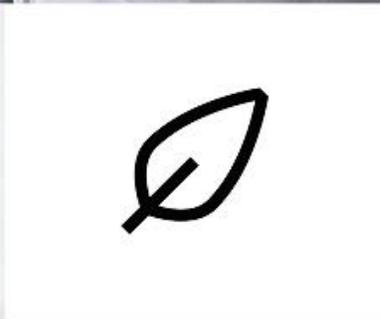
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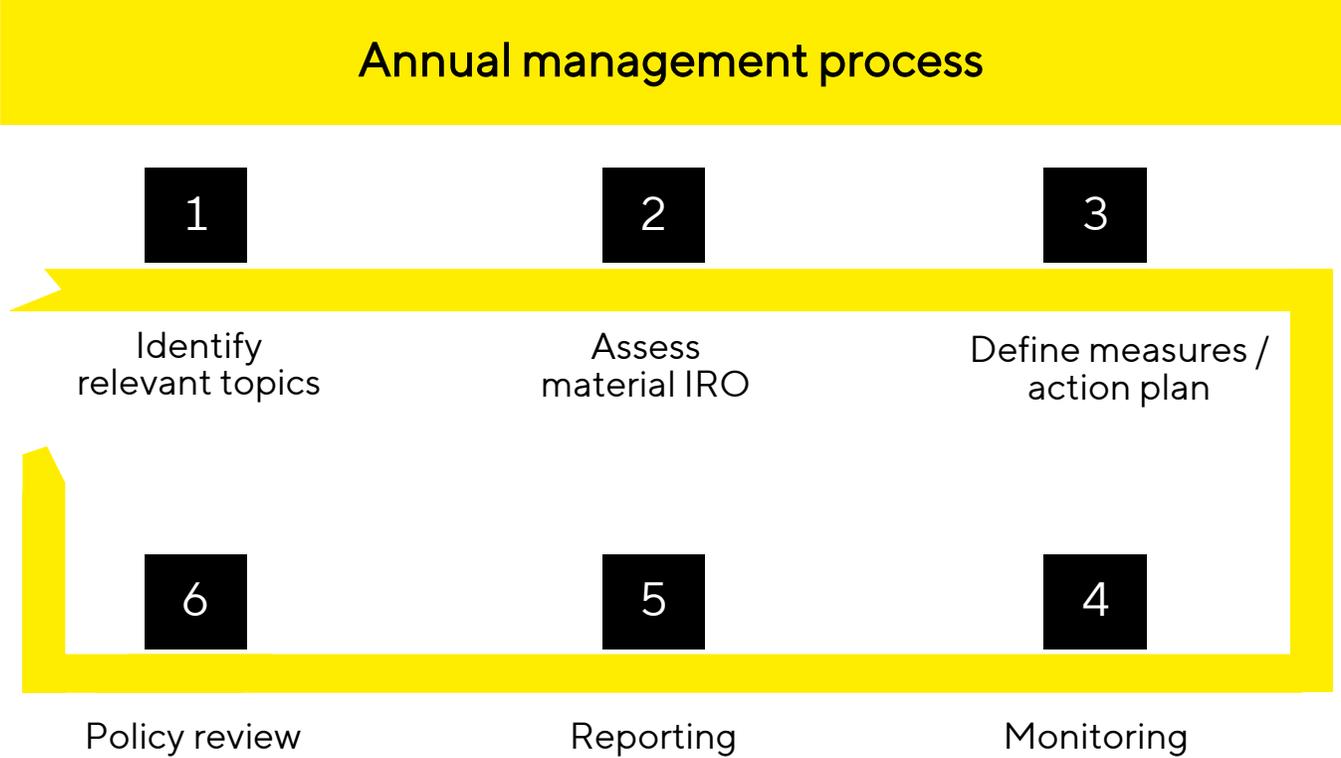
Governance



# Sartorius actively manages its sustainability impacts, risks and opportunities at its own operations

**Existing and upcoming EU regulation**

- Corporate Sustainability Due Diligence Directive (CSDDD)
- Taxonomy Regulation
- Corporate Sustainability Reporting Directive (CSRD)



# Multiple data points to be consistently tracked consistently

Reporting topics	
Climate 	Water 
Pollution 	Biodiversity 
Resources 	Own workforce 
Workers in the value chain 	Communities 
Consumers 	Business conduct 

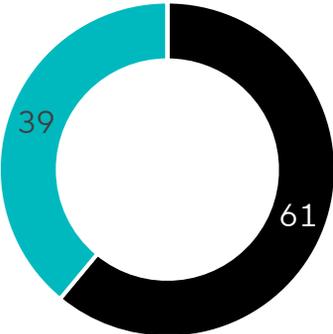
## Challenges

- > 80 disclosure requirements
- > 1.000 data points
- 17 GHG emission categories
- Data from multiple sources
- Concepts for data calculation and estimates
- Data governance and enrichment projects
- Continuous data improvement

Reporting partially based on external data which can be subject to changes and specifications; therefore, continuous and retrospective restatements of certain data might be necessary.

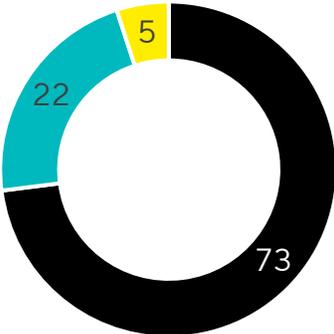
# Alignment of 2023 turnover & expenditures with EU taxonomy

Total sales revenues in %<sup>1</sup>



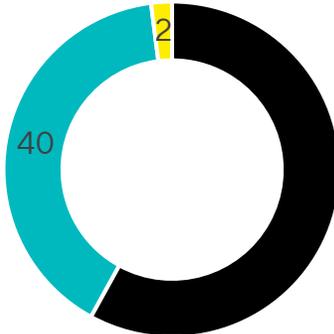
- Not Taxonomy-eligible
- Taxonomy-eligible but not aligned
- Taxonomy-aligned

Total CapEx in %



- Not Taxonomy-eligible
- Taxonomy-eligible but not aligned
- Taxonomy-aligned

Total OpEx in %



- Not Taxonomy-eligible
- Taxonomy-eligible but not aligned
- Taxonomy-aligned

All figures rounded

<sup>1</sup> Sartorius does not have any taxonomy-eligible economic activities for which it would currently have been possible to assess compliance with the technical screening criteria as legislation only addresses particularly relevant economic activities for the achievement of the environmental objectives in the field of climate change mitigation and climate change adaptation, i.e. only a limited range of industries is covered.

# Sustainability ratings and partnerships

Listed in

DAX<sup>®</sup> 50 ESG

Sustainability ratings



AA

ecovadis

Silver



Low risk



C

Memberships and cooperation in internationally renowned initiatives and platforms



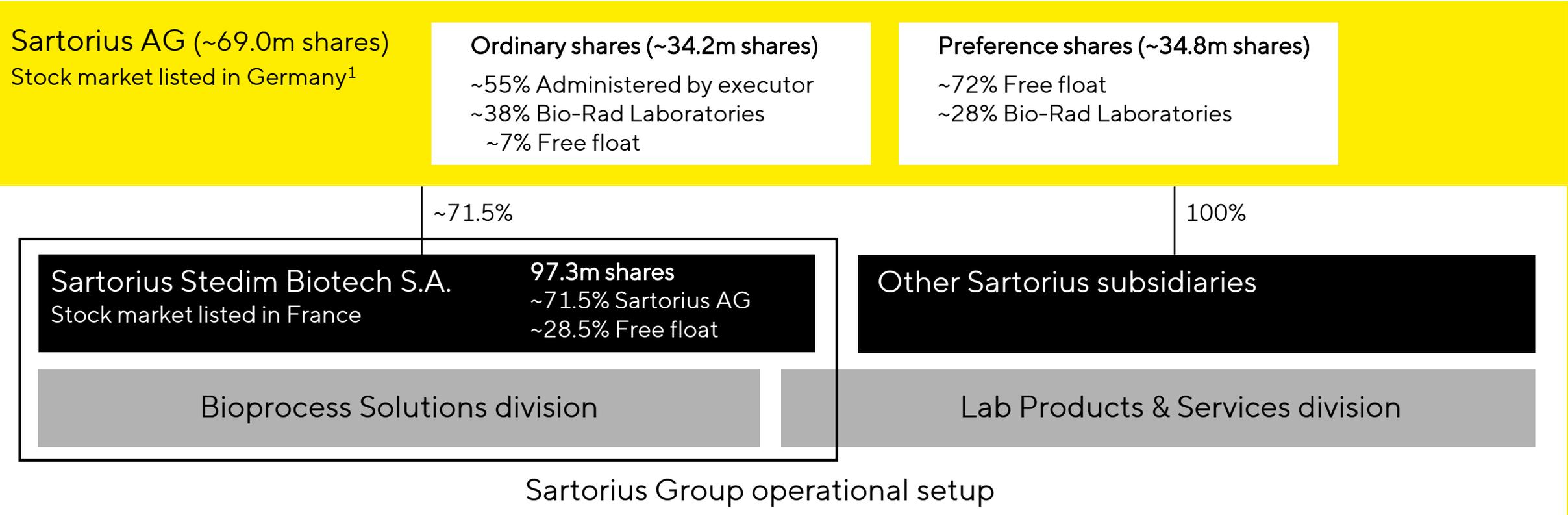
econsense

ecovadis



# Sartorius legal structure

## Sartorius Group legal setup



1 The ownership relates to outstanding shares and thus excludes treasury shares. Information on shareholdings and shares in free float pursuant to the disclosure requirements of Sections 33 et seq. of the German Securities Trading Act (WpHG) and the shareholders' own disclosures. The legal disclosure requirements refer only to voting shares and not to non-voting preference shares.

# Executive Board of Sartorius AG



## Joachim Kreuzburg, CEO

Joined Sartorius in 1999  
Member of the Board since 2002

Group Strategy, Corp Research, HR,  
Legal & Compliance,  
Communications, Sustainability



## René Fáber

Joined Sartorius in 2002  
Member of the Board since 2019

Bioprocess Solutions Division



## Alexandra Gatzemeyer

Joined Sartorius in 2005  
Member of the Board since May 1,  
2023

Lab Products & Services Division



## Florian Funck, CFO

Joined Sartorius in 2024  
Member of the Board since April 1,  
2024

Finance, Information Technology,  
Data Management, Corporate  
Sourcing

# Two-tier Board system of Sartorius AG – Supervisory Board and its committees

- Twelve members, half of the members are shareholders' representatives and half are employees' representatives

## Executive Task Committee

Dr. Lothar Kappich (Chairman)  
Annette Becker  
Prof. Dr. Klaus Rüdiger Trützscher  
Manfred Zaffke

## Nomination Committee

Dr. Daniela Favoccia  
Dr. Lothar Kappich  
Prof. Dr. Klaus Rüdiger Trützscher

## Audit Committee

Prof. Dr. Klaus Rüdiger Trützscher (Chairman)  
Dietmar Müller  
Dr. Lothar Kappich  
Manfred Zaffke

## Conciliation Committee

Dr. Lothar Kappich (Chairman)  
Annette Becker  
Prof. Dr. Klaus Rüdiger Trützscher  
Manfred Zaffke

# One-tier Board of Sartorius Stedim Biotech S.A. subgroup



Dr. Joachim Kreuzburg Chairman	Dr. René Fáber CEO	Romaine Fernandes Employee representative	Pascale Boissel	Susan Dexter	Anne-Marie Graffin Lead Independent Director	Lothar Kappich	Henri Riey
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Share of independent members

Audit Committee			•	•	•	•		75%
Remuneration & Nomination Committee			•	•	•	•		75%
Independence			•	•	•			43%

# ESG aspects included in Sartorius AG executive remuneration

		Remuneration components	Structure of the remuneration components	Maximum bonus (in % of the target amount)	Maximum remuneration	Further benefits			
Fixed	Cash	Fixed remuneration	Basic remuneration + Fringe benefits	100%	Maximum amount of all cash remuneration components for the respective fiscal year	Compensation for post-contractual non-competition clause (50% of most recent remuneration)			
		Retirement benefits	Basic amount Additional amount (matching contribution)	100% 120%					
Variable	Cash	Short-term variable remuneration	Sales revenue   Order intake (Group and/or division)	40%		120%	Clawback		
			Underlying EBITDA (Group and/or division)	40%					
			Ratio of net debt to underlying EBITDA (Group and/or division)	10%					
			Employee Net Promotor Score (Group and/or division)	10%					
Variable	Share-based payment	Long-term variable remuneration	Consolidated net profit	25%		120%	Severance cap in the event of early contract termination		
			Reduction of CO <sub>2</sub> -equivalent emission intensity	25%				120%	
			Phantom stock units	50%			250%		+ Proportional grant date fair value of share-based payment for the respective fiscal year
			Share-based payment				One-time allotment; afterwards, no measurement of inflow		

# Corporate responsibility & further financial information

To Sartorius, sustainability means operating responsibly over the long term – with respect to business partners, employees and society as well as to natural resources. Learn more about our commitment:

 [SRI Presentation](#)    [Sustainability Report 2022](#)



Please click below for further financial information:

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-  [Earnings Release FY 2023](#)
-  [Annual Report 2023](#)
-  [Non-financial Group Statement 2023](#)
-  [Corporate Governance Report 2023](#)
-  [Earnings Release 9M 2023](#)
-  [Half Year Report H1 2023](#)

# Contacts and Financial calendar



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37079 Göttingen, Germany

- **April 28, 2024**  
Publication Q1 2024 Results
- **May 16, 2024**  
Capital Markets Day | Goettingen
- **May 30, 2024**  
Kepler Cheuvreux ESG Conference | Virtual
- **Jul 19, 2024**  
Publication Half-Year Report 2024
- **Oct 17, 2024**  
Publication 9M 2024 Results

# Disclaimer

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This presentation contains statements concerning the future performance of the Sartorius Group. These statements are based on assumptions and estimates. Although we are convinced that these forward-looking statements are realistic, we cannot guarantee that they will actually materialize.

This is because our assumptions harbor risks and uncertainties that could lead to actual results diverging substantially from the expected ones. It is not planned to update our forward-looking statements.

Throughout this presentation, differences may be apparent as a result of rounding during addition.

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