

Stora Enso investor kit Q1 2023



THE RENEWABLE MATERIALS COMPANY

Disclaimer



It should be noted that Stora Enso and its business are exposed to various risks and uncertainties and certain statements herein which are not historical facts, including, without limitation those regarding expectations for market growth and developments; expectations for growth and profitability; and statements preceded by “believes”, “expects”, “anticipates”, “foresees”, or similar expressions, are forward-looking statements. Since these statements are based on current plans, estimates and projections, they involve risks and uncertainties which may cause actual results to materially differ from those expressed in such forward-looking statements. Such factors include, but are not limited to: (1) operating factors such as continued success of manufacturing activities and the achievement of efficiencies therein, continued success of product development, acceptance of new products or services by the group’s targeted customers, success of the existing and future collaboration arrangements, changes in business strategy or development plans or targets, changes in the degree of protection created by the group’s patents and other intellectual property rights, the availability of capital on acceptable terms; (2) industry conditions, such as strength of product demand, intensity of competition, prevailing and future global market prices for the group’s products and the pricing pressures thereto, price fluctuations in raw materials, financial condition of the customers and the competitors of the group, the potential introduction of competing products and technologies by competitors; and (3) general economic conditions, such as rates of economic growth in the group’s principal geographic markets or fluctuations in exchange and interest rates. All statements are based on management’s best assumptions and beliefs in light of the information currently available to it and Stora Enso assumes no obligation to publicly update or revise any forward-looking statement except to the extent legally required.



Content



Group.....	4–15
Divisions.....	16–62
Financials and governance.....	63–79
Forest assets & fair valuation.....	80–86
Latest interim report.....	87–115

Stora Enso in brief



Stora Enso is one of the largest private forest owners in the world, and a leading provider of renewable products in packaging, biomaterials and wooden construction



Stora Enso shares are listed on NASDAQ OMX Helsinki and Stockholm, and traded in the USA as ADRs.

Sales
€11.7 billion
in 2022



Operational EBIT
€1,891 million
in 2022



~21,000
employees



Market cap: ~€ 9 billion

Our foundation for a renewable future and sustainable business



Foundation



Forest



Pulp



Traditional
wood
products

Key strategic growth areas



Renewable
packaging



Sustainable
building
solutions



Renewable
biomaterials
innovations

Leading market positions in all divisions



Forest

One of the largest private forest owners in the world

Traditional Wood Products

Sawn wood #1 in Europe

Pulp

Fluff pulp #1 in Europe

Consumer board

LPB #1 Globally

FSB #1 in Europe

FBB #2 in Europe

CUK #1 in Europe

SBS #1 in Europe

Containerboard

Kraftliner #4 in Europe

SC fluting #3 in Europe

Recycled containerboard* #5 in Eastern Europe

Packaging solutions

Corrugated boxes #1 in Nordics

Corrugated boxes top three in Benelux

Building Solutions

CLT #1 Globally

Biomaterials innovations

Kraft lignin #1 Globally

Capacities by division



Division	Capacity 1,000 t
Packaging Materials	
Consumer Board	3,490
Containerboard	2,315
Barrier coating	655
Paper*	990
Packaging Solutions	1,775 Mm2
Wood Products	
Sawing	5.4 Mm3
Further processing	2.5 Mm3
Building Solutions	495 m3**
Pellets	485

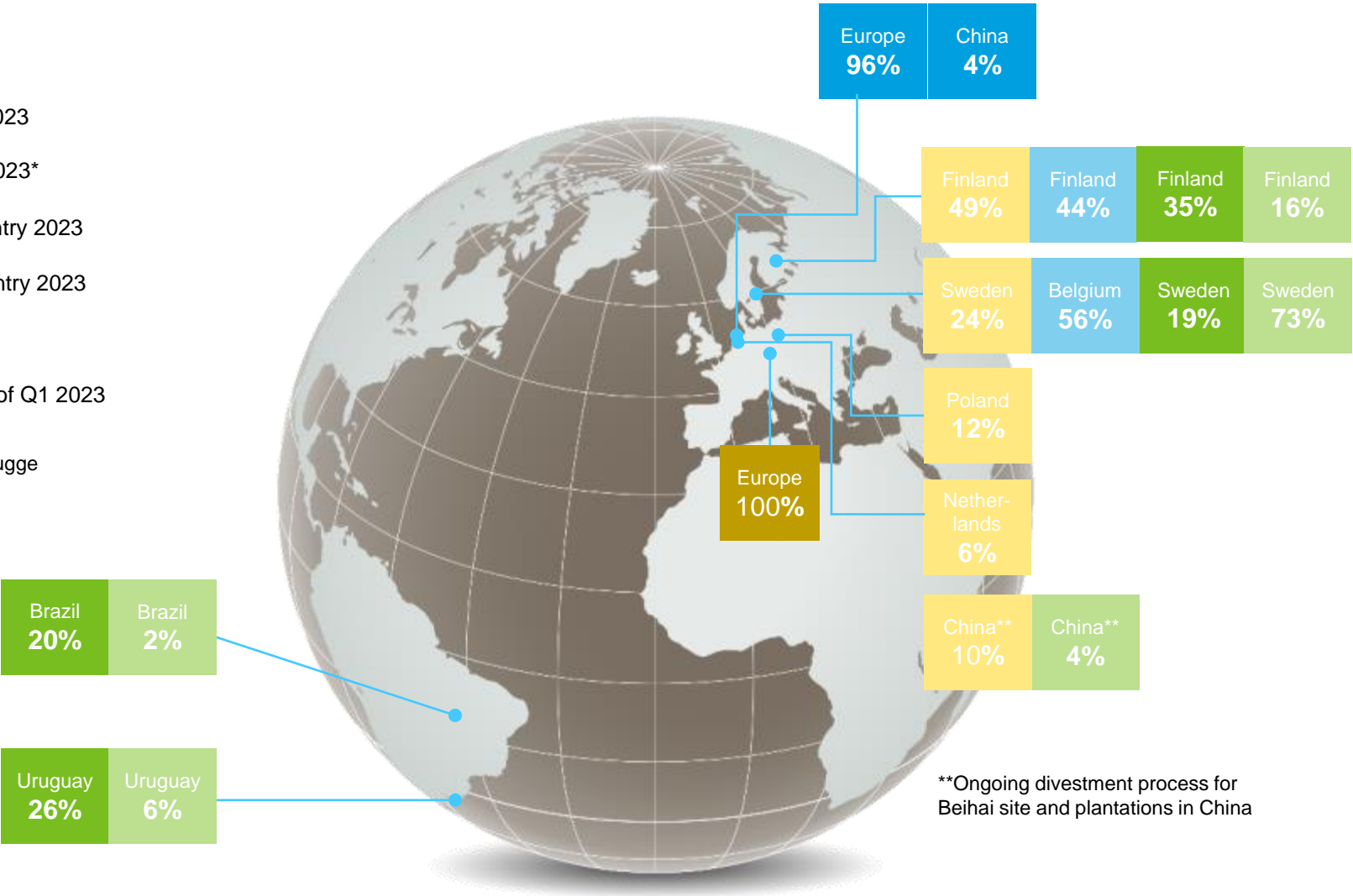
Division	Capacity 1,000 t
Biomaterials	
Softwood and fluff pulp	1,550
Hardwood pulp	1,325
Kraft lignin	50
Group forest assets	
Total area	2.0m ha
Productive area	1.6m ha

Global capacity and forest asset distribution



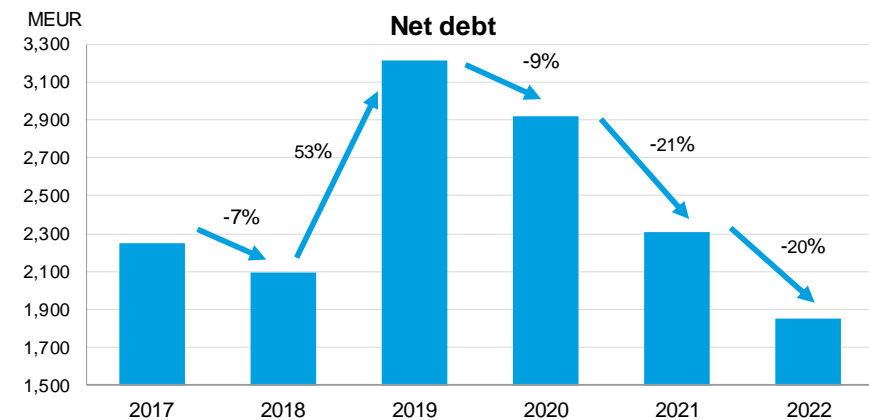
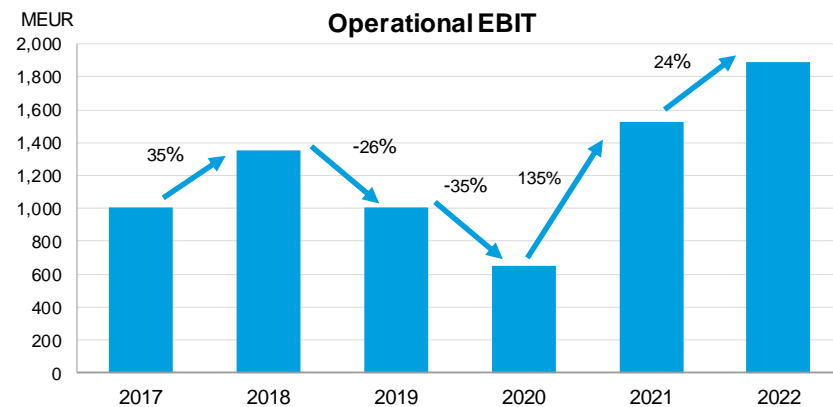
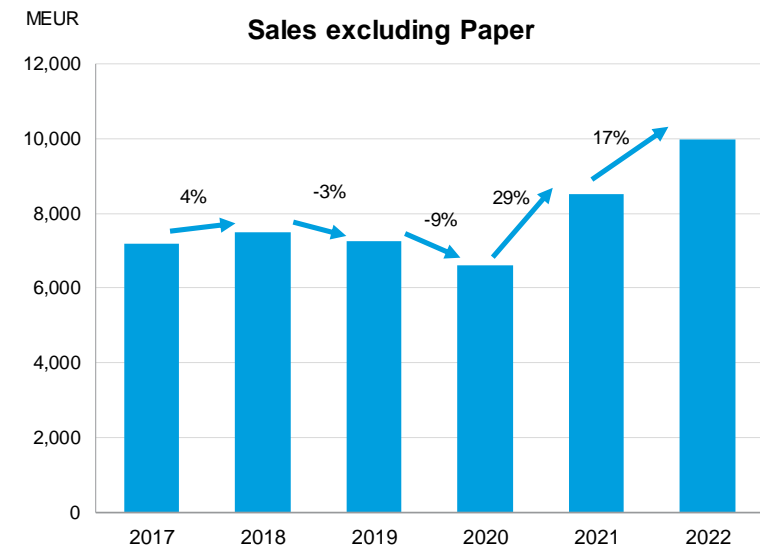
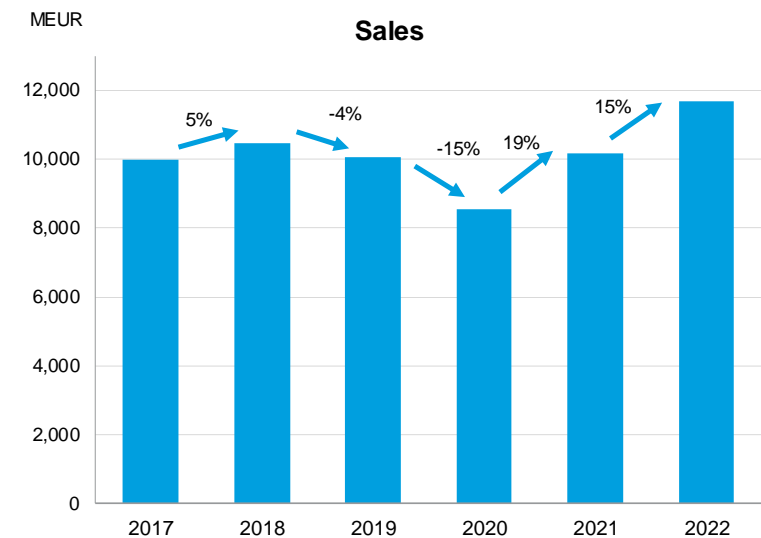
- Board capacity by country 2023
- Paper capacity by country 2023*
- Packaging Solutions by country 2023
- Market pulp capacity by country 2023
- Wood Products in 2023
- Forest assets by country as of Q1 2023

*Including Anjala and Langerbrugge

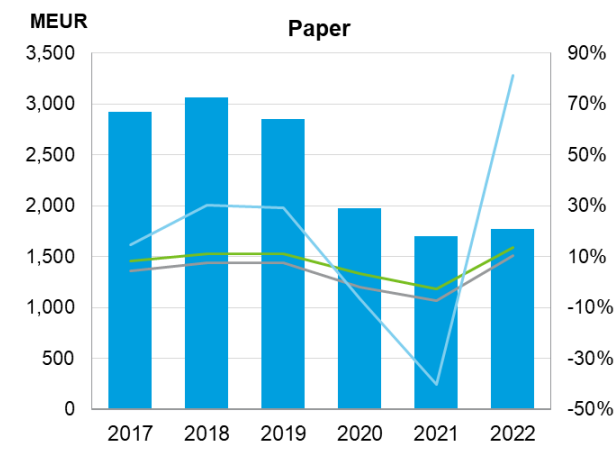
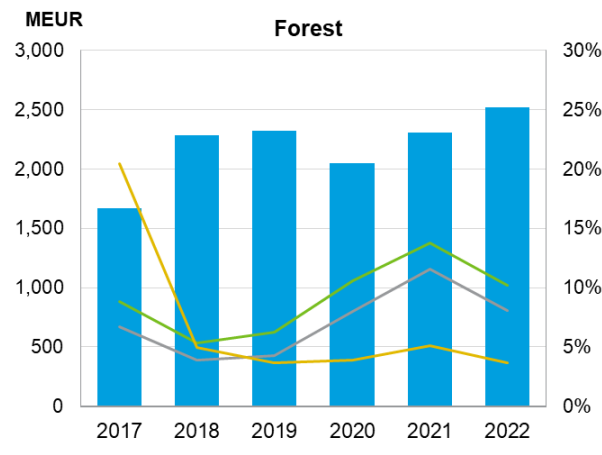
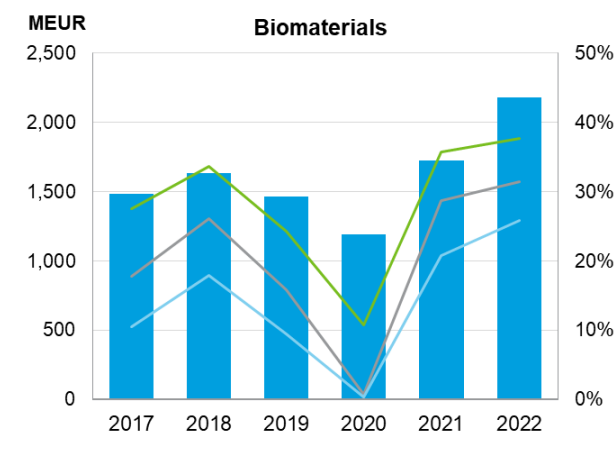
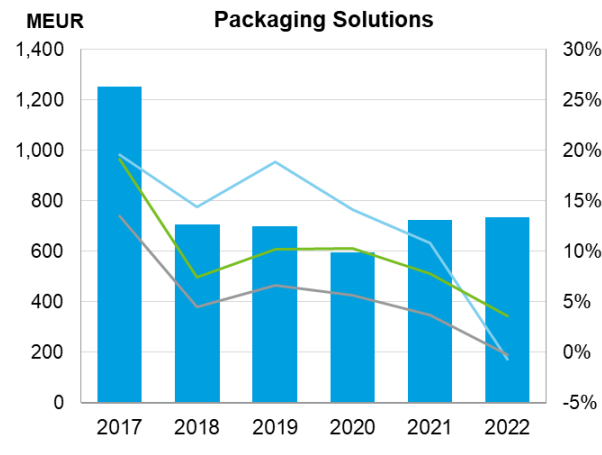
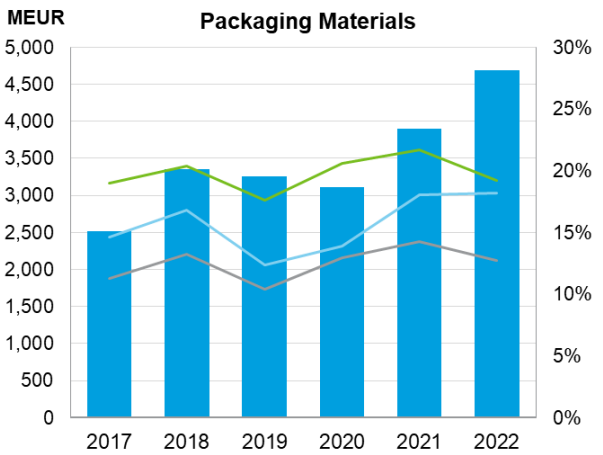


**Ongoing divestment process for Beihai site and plantations in China

Group financial performance annually

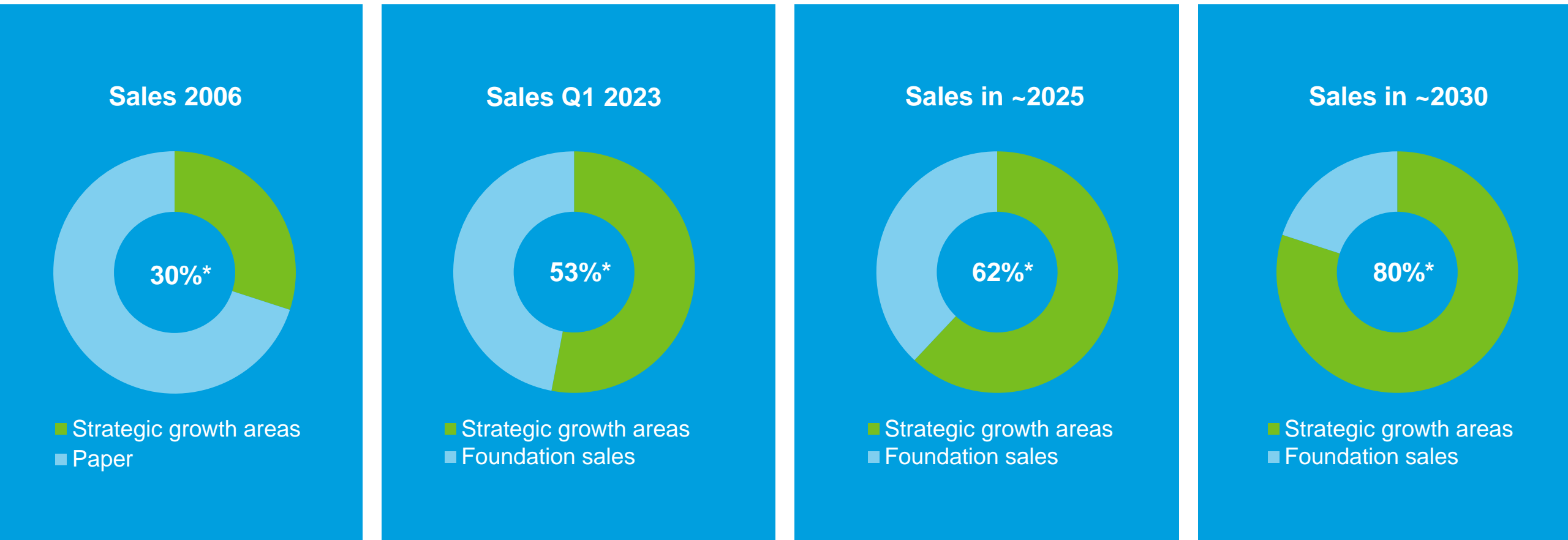


Annual financial performance by division



- Sales
- Operational EBIT margin
- Operational EBITDA margin
- Operational ROOC
- Operational ROCE

Targeting to generate 80% from strategic growth areas by 2030



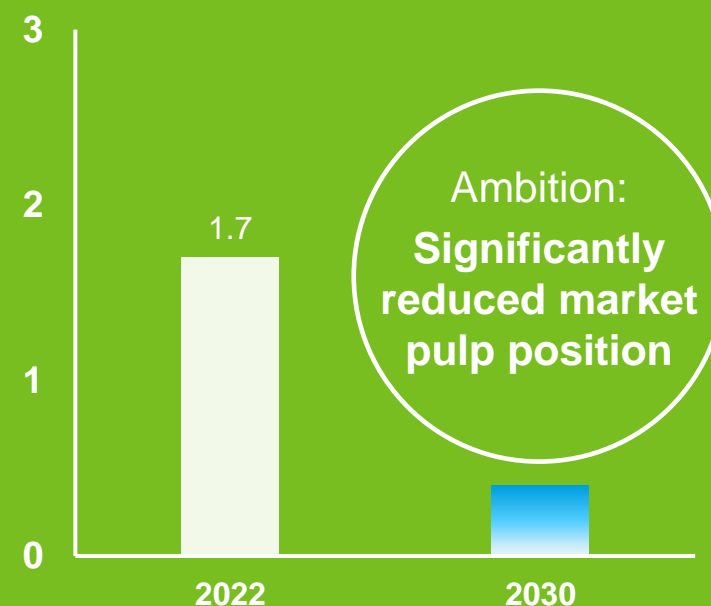
*Strategic growth areas include Packaging Materials, Packaging Solutions, Biomaterials Innovations (part of Biomaterials), Building Solutions (part of Wood Products) and New business (part of Segment Other)
**Foundation businesses include Pulp in Biomaterials, Traditional Wood Products in Wood Products, Forest and Paper

Ambition to significantly reduce earnings cyclicity and long market pulp position



- Exiting paper business
- Growth in packaging with increased integration of eucalyptus pulp
- Developing a more value-add pulp product mix
- Growing the share of building solutions

Group net standard* pulp position for the next twelve months (million tonnes)



We make a positive climate impact



Our value
chain emissions

8.0

million tonnes of CO₂

Our forests
remove carbon

-1.5

million tonnes of CO₂

Our carbon
products store

-2.5

million tonnes of CO₂

Our products
substitute fossil-
based products save

-16.2

million tonnes of CO₂

Our sustainability performance



Targets



-50%

reduction in absolute emissions by 2030 (Scope 1,2,3)



100%

Recyclable products by 2030



Net positive

Impact on biodiversity by 2050

Status



Scope 1 + 2

-32%

(Q1 2023 compared to the base year 2019)

Scope 3

-27%

(2022 compared to the base year 2019)



94%

(Q1 2023)



Target to reach 100% compliance by indicator*

Stora Enso ~2030 ambition*



+30% sales

vs 2021
(excl. inflation)

**15% operational
EBIT margin**
over a cycle

Packaging >60%
of sales

Wood Products

>40%
of sales from Building
solutions

+75%
operational EBITDA over
a cycle**

**Earnings cyclicity
reduced by half****

No paper exposure

Significantly reduced
market pulp exposure

New revenue streams

1 BEUR sales
from Biomaterials
innovation

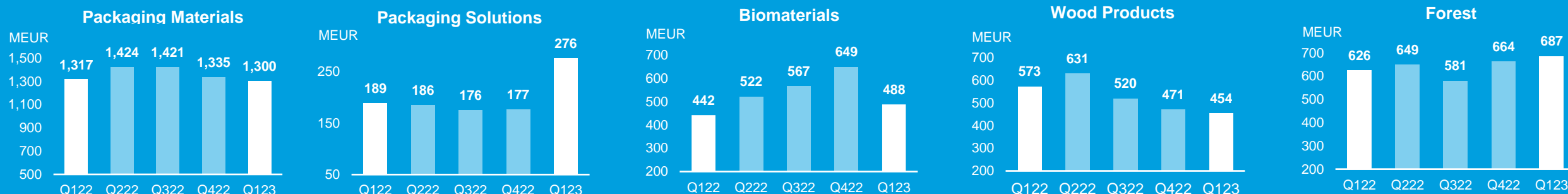
5-10 TWh
of wind power on own
forest land

Divisions

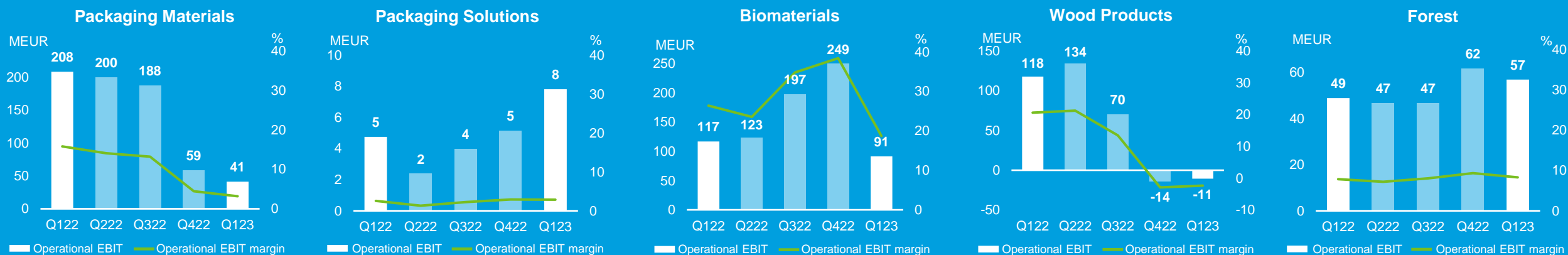
Key financial figures by division



Sales



Operational EBIT and Operational EBIT Margin



Packaging

- Packaging Materials
- Packaging Solutions

Packaging Materials division in brief



- Aims to lead the development of circular packaging, providing premium packaging materials based on virgin and recycled fiber
- Helping customers to replace fossil-based materials with low-carbon, renewable and recyclable alternatives for their food and drink, pharmaceutical or transport packaging
- World-class cost-competitive integrated production sites close to raw material sources
- Main products: consumer board, containerboard and barrier coatings
- The customers are converters, brand owners and retailers

Packaging Solutions in brief

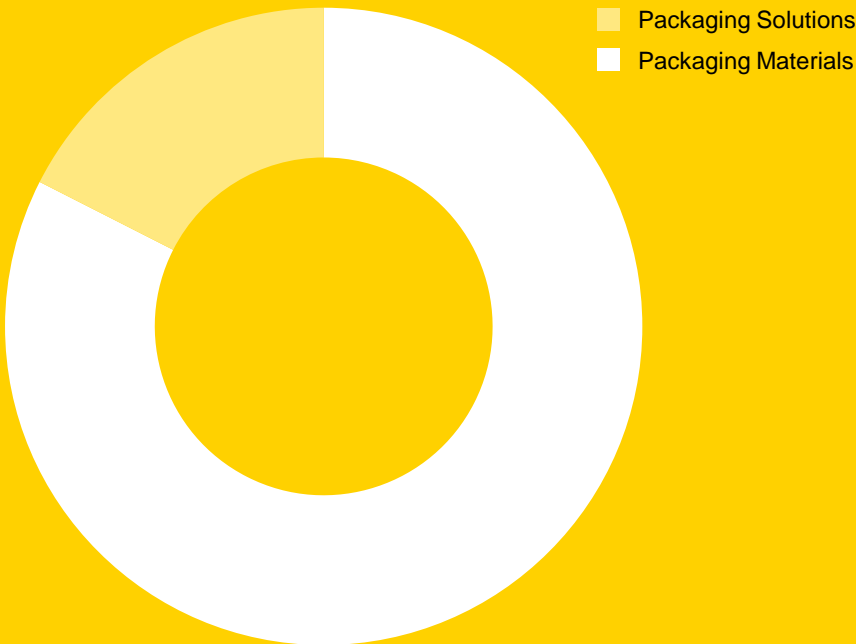


- Develops and sells premium fiber-based packaging products and services
- Innovation collaboration throughout the whole value chain for developing renewable packaging materials
- High-end, eco-friendly packaging products which are used by leading brands across multiple market sectors, including the retail, e-commerce and industrial sectors
- The portfolio includes converting corrugated board and cartonboard
- Operations in Northern, Central and Western Europe as well as in China

We have the broadest portfolio in the industry



Sales mix Q1 2023



Consumer board



Containerboard



Packaging Solutions



Leading market positions in Europe and global reach



- **Top 10 largest** global supplier of packaging board
- **Premium products and services** for demanding end uses
- **Kraftliner and SC fluting** global premium niche
- **Corrugated packaging** market fragmented
- **Capacity increases** through organic and acquisitive growth

Consumer board

Stora Enso's market position

- **LPB** #1 Globally
- **FSB** #1 in Europe
- **FBB** #2 in Europe
- **CUK** #1 in Europe
- **SBS** #1 in Europe

Packaging solutions

- **Corrugated boxes** #1 in Nordics
- **Corrugated boxes** top three in Benelux

Containerboard

- **Kraftliner** #4 in Europe
- **SC fluting** #3 in Europe
- **Recycled containerboard*** #5 in Eastern Europe

*Including testliner and recycled fluting

THE RENEWABLE MATERIALS COMPANY

Integration benefits in core regions



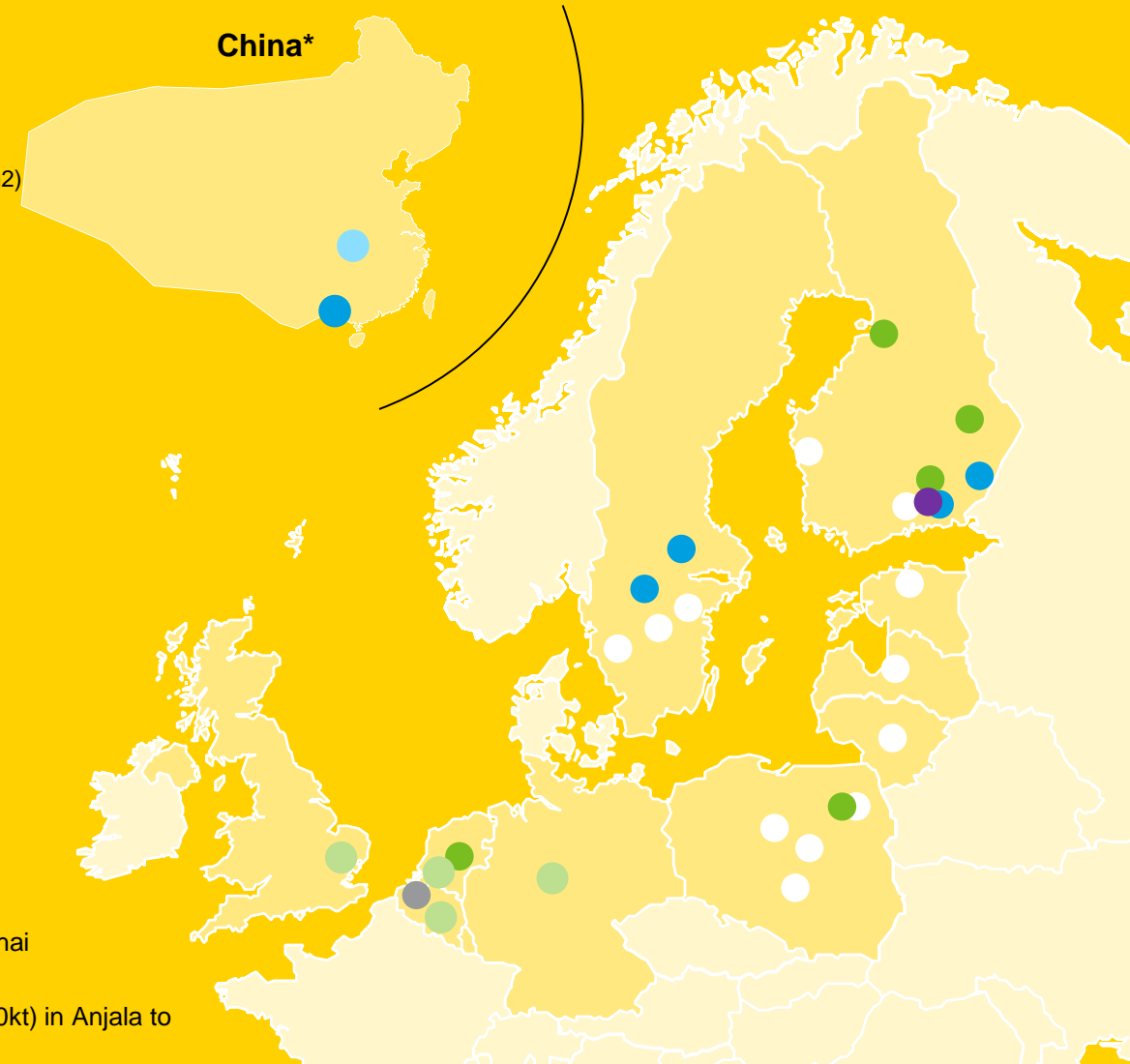
Nordics and Baltics

- Premium carton and liquid packaging board
- Virgin fiber containerboard and converting
- Megasites for economies of scale and integration benefits
- Smaller production sites with niche product concepts
- Optimising product mix

Eastern and Western Europe

- Recycled containerboard and converting in Poland
- Beverage carton recycling in Poland
- Potential to use more containerboard internally

- Consumer board production (3,490 kt)
- Containerboard production (2,315 kt)
- Corrugated packaging (935 Mm2)
- Folding carton packaging (70 Mm2)
- De Jong corrugated packaging (770 Mm2)
- Langerbrugge, Belgium (555kt)
- Anjala**, Finland (435kt)



Stronger European market presence in corrugated packaging through De Jong acquisition



Packaging Solutions' sales including De Jong **€276 million** in Q1 2023



Packaging Solutions' capacity including De Jong **1,775** million square metre for 2023

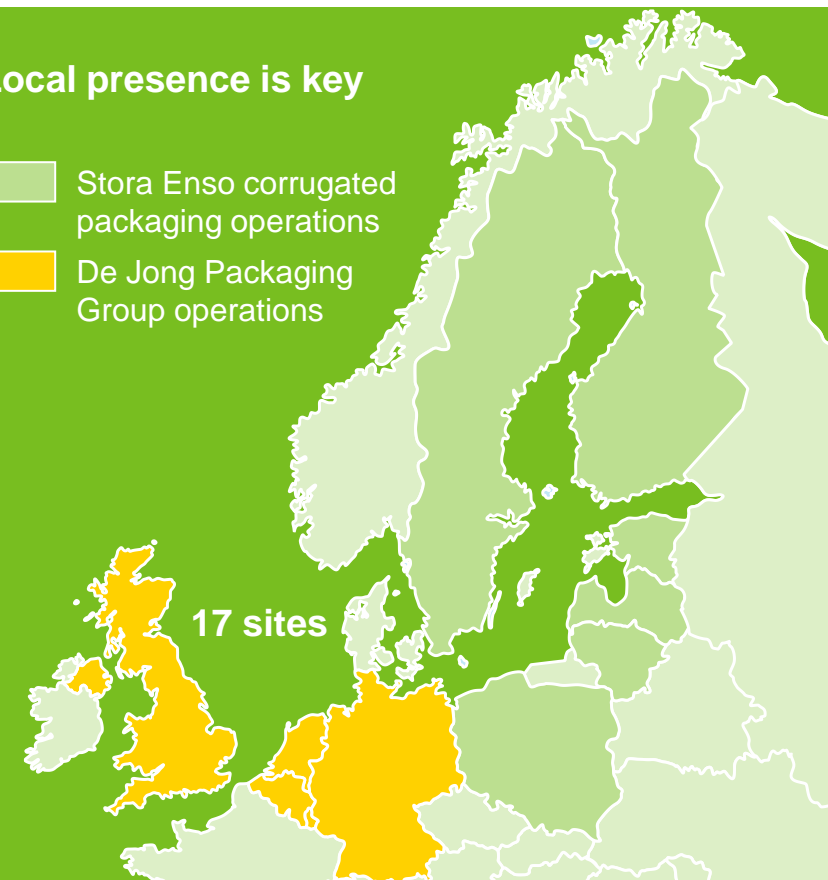
€30 million average annual synergies over the cycle after three years

€40 million additional annual EBITDA impact by 2025 from ongoing expansions

Integration process proceeded according to plan in Q1 2023

Local presence is key

-  Stora Enso corrugated packaging operations
-  De Jong Packaging Group operations



Construction of a new consumer board line at the Oulu site proceeding according to plan



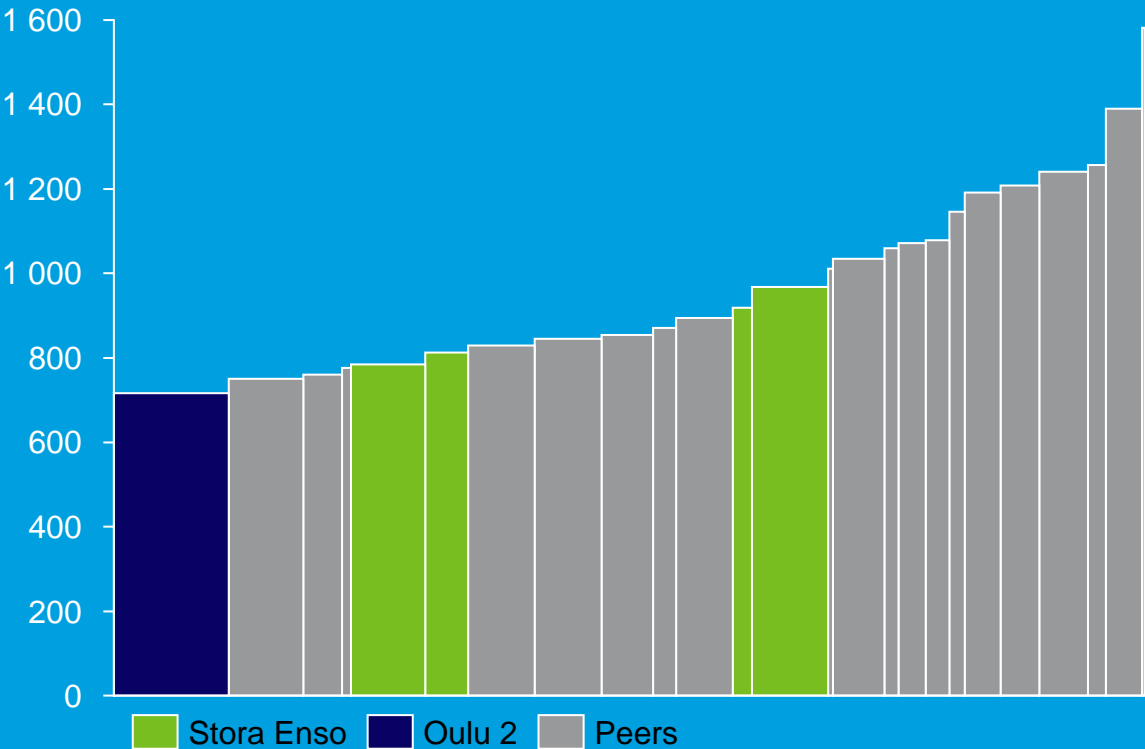
- Investing ~€1bn in 2022 – 2025 to convert the second idle paper machine at our Oulu site in Finland
- Production estimated to start early 2025
- Starting consumer board line for folding box board and coated unbleached kraft to a total capacity of 750,000 tonnes/y
- Expected annual sales ~€800m
- Reducing earnings volatility by lowering the Group's market pulp exposure by ~250,000 tonnes/y
- Target end-use segments: food and drink, frozen and chilled, mainly in Europe and North America



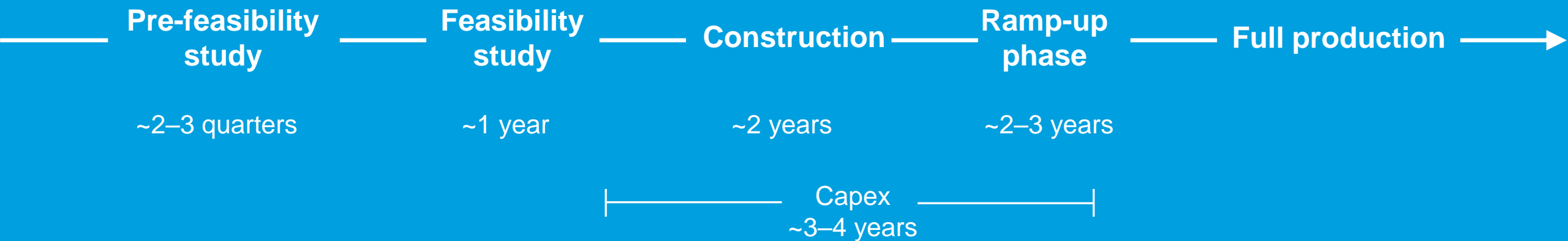
Oulu 2 consumer board line expected to be lowest cash costs producer in Europe



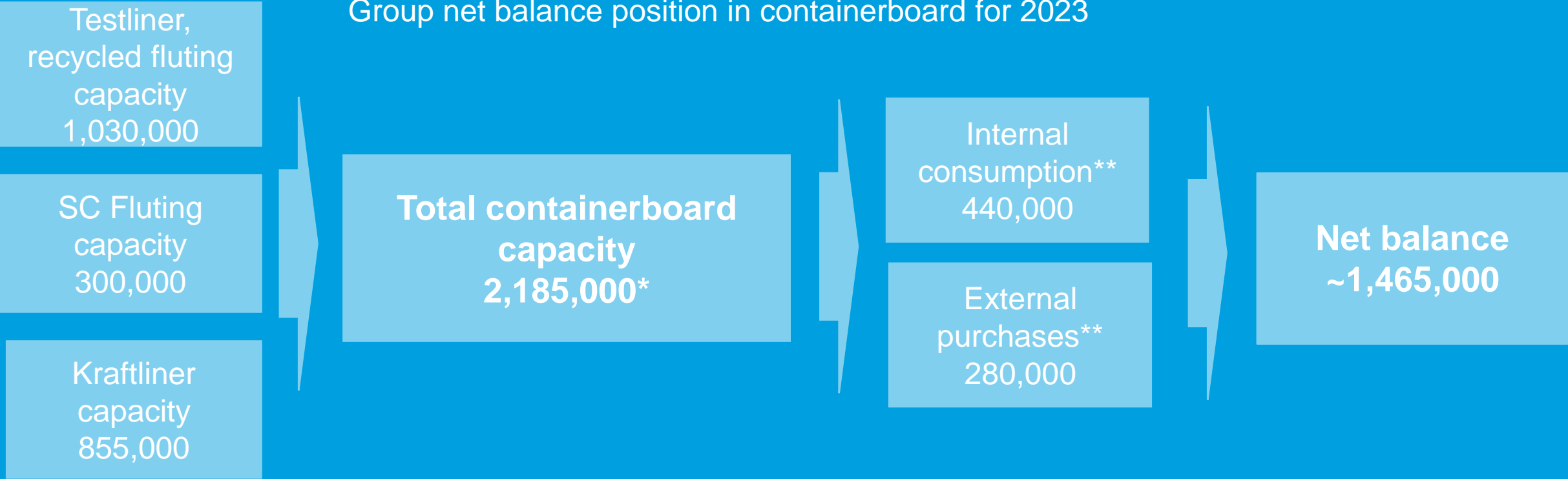
Estimated European* FBB reels, delivered Frankfurt
EUR/tons 2022
Cost based pricing for captive pulp



Planning and implementation of growth projects



We are committed to reduce our long position in containerboard



*Excluding Ostroleka sack and wrapping paper capacity of 130,000 tonnes
**Based on rolling 12 months estimate

Packaging ~2030 ambition



**>60% sales
increase**

vs 2021

**Highest industry
margins**

**Leader in
sustainable
packaging design
and innovation**

**100% recyclable
products (technically)**

EBIT >2x

vs 2021

**Fully integrated
board capacity with
internal pulp**

**50% carbon
footprint reduction**

**Full adoption of
Circular Design
Guidelines (2025)**

Biomaterials



THE RENEWABLE MATERIALS COMPANY

Biomaterials division in brief

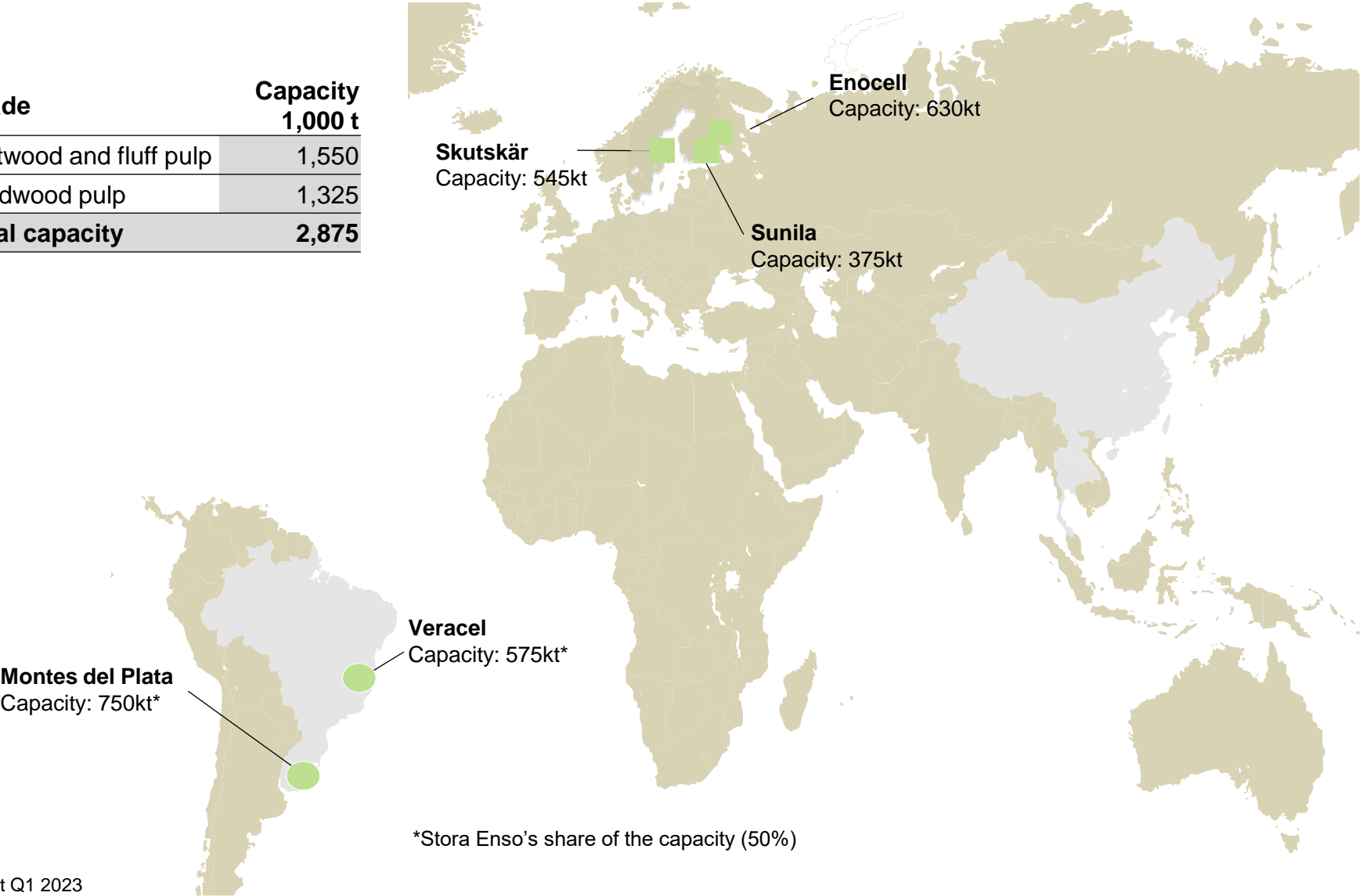


- Biomaterials division meets the growing demand for bio-based solutions to replace fossil-based and hazardous materials
- We use all fractions of biomass to develop new solutions
- Our pulp offering encompasses a wide variety of grades to meet the demands of board, paper, specialty paper, tissue and hygiene product producers, as well as materials from process side streams, such as tall oil and turpentine from biomass
- Our work to replace fossil-based materials includes novel applications such as Lignode and bio-based binders

Biomaterials worldwide



Grade	Capacity 1,000 t
Softwood and fluff pulp	1,550
Hardwood pulp	1,325
Total capacity	2,875



*Stora Enso's share of the capacity (50%)

Our products and sales mix form the foundation for biomaterial innovation



Sales mix Q1 2023



Pulp sales by end use Q1 2023



Pulp Market size €45 billion, CAGR +2%



Innovative biomaterials



Significant growth opportunity in biomaterials innovation



Market size	€10 billion	€20 billion
Long-term EBITDA margin potential	50%	40%
CAGR	 Anode material +25-30% CAGR	 Bio-binders +3-4% CAGR

Reducing carbon footprint with bio-based binders



High bonding strength
and water resistance

Replacing fossil-based
chemicals

Market €20 billion

Current share <1%



Lignode replaces non-renewable graphite in batteries



**Anode material
Lignode®**



**Anode material
on foil roll**



**Rolled into
Lithium-ion cells**










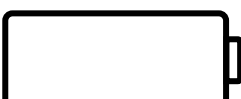


**Cells are stacked
into battery pack**



- Electric vehicles
- Stationary energy storage
- Other electric products

Higher performance and faster charging compared to pure graphite



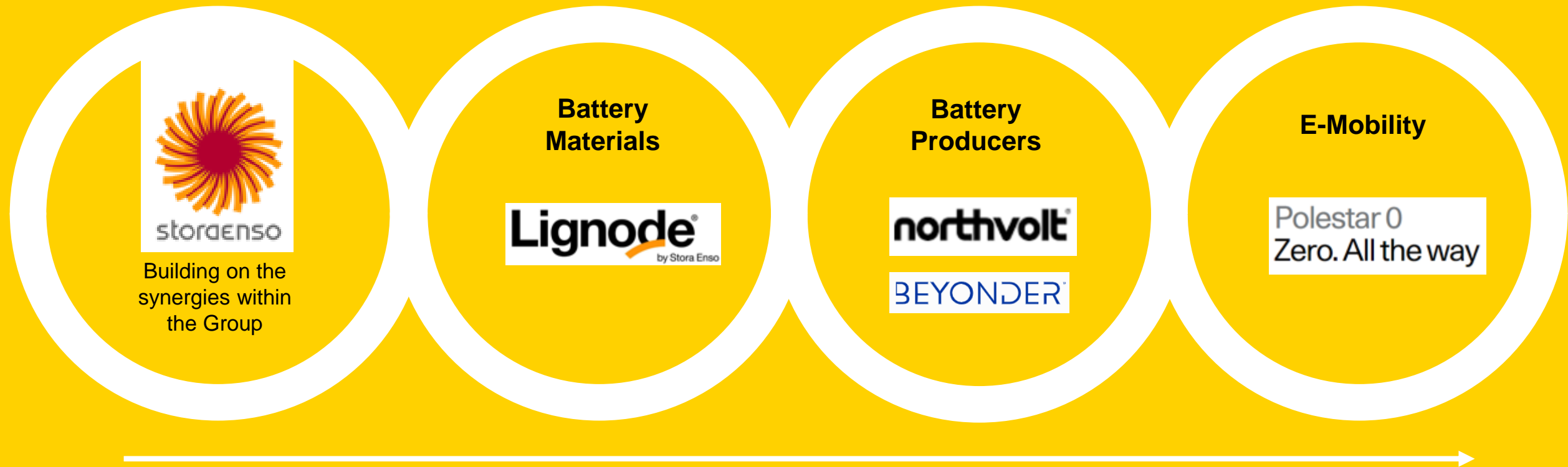
Properties	100% Lignode	Lignode/graphite mixtures
Fast charging/ discharging		
Low temperature performance		
Cycling stability		
Energy density		
Sustainability		



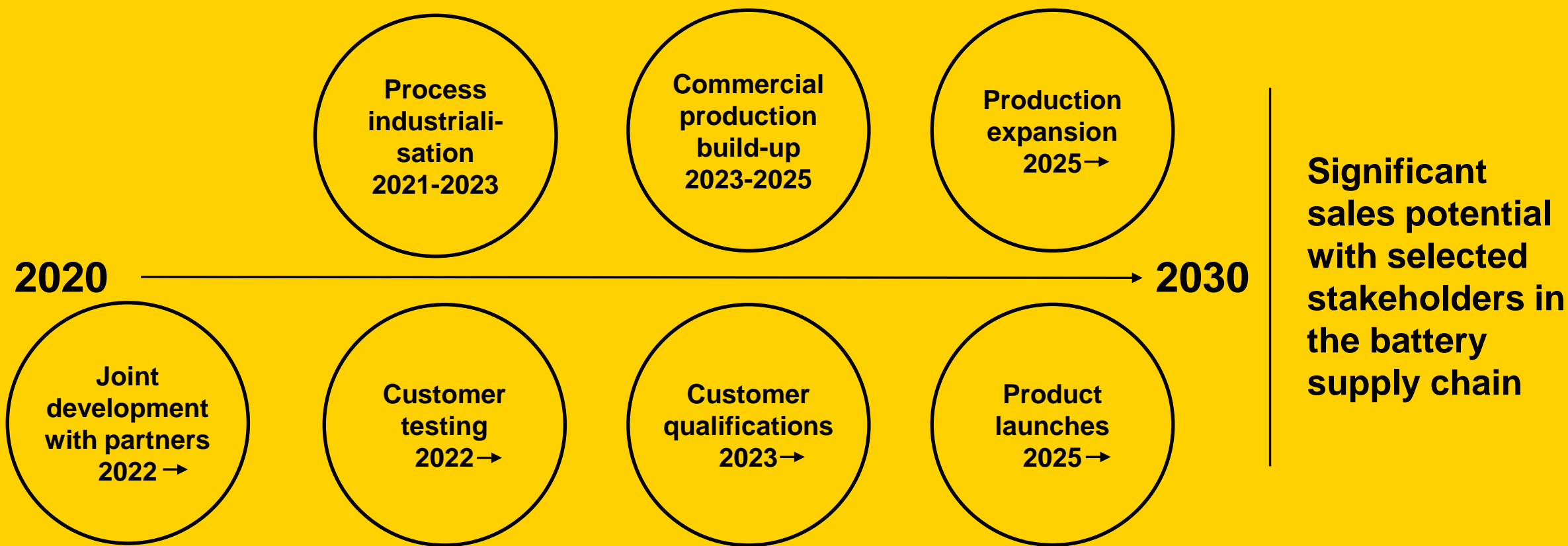
Partnering across the battery value-chain to make electrification more sustainable



Battery value-chain with Stora Enso announced collaborations



We are accelerating the development and scale-up of Lignode with customers and partners



Biomaterials ~2030 ambition



**€1bn sales in
innovative
biomaterials**

**Reduced market
pulp position**

**Full scale-up
of Lignode**

**Leadership in
European fluff**

**50% carbon
footprint reduction**

**Maintaining strong
competitiveness**

Wood Products

Wood Products division in brief



- Largest sawn wood producer in Europe and a leading provider of sustainable wood-based solutions for the construction industry globally
- The growing Building Solutions business offers building concepts to support low-carbon construction and eco-friendly designs
- Developing digital tools to simplify the design and construction of building projects with wood
- High demands with regard to safety, quality, design and sustainability
- The customers are mainly merchants and retailers, industrial integrators and construction companies

Our two strategic pillars enable financial stability and resilience



Sales mix Q1 2023



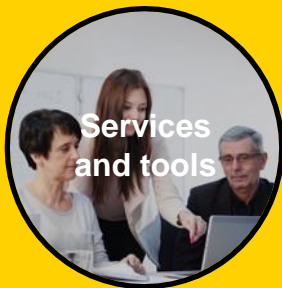
Traditional wood products
Building Solutions

Traditional wood products



3-4% annual market growth rate long-term
Market size: >€100 billion

Building Solutions



<10% annual market growth rate long-term
Market size: >€1 billion for wooden multi-storey buildings

Climate change can be mitigated with wood construction



CO₂ savings for every m³ built with wood

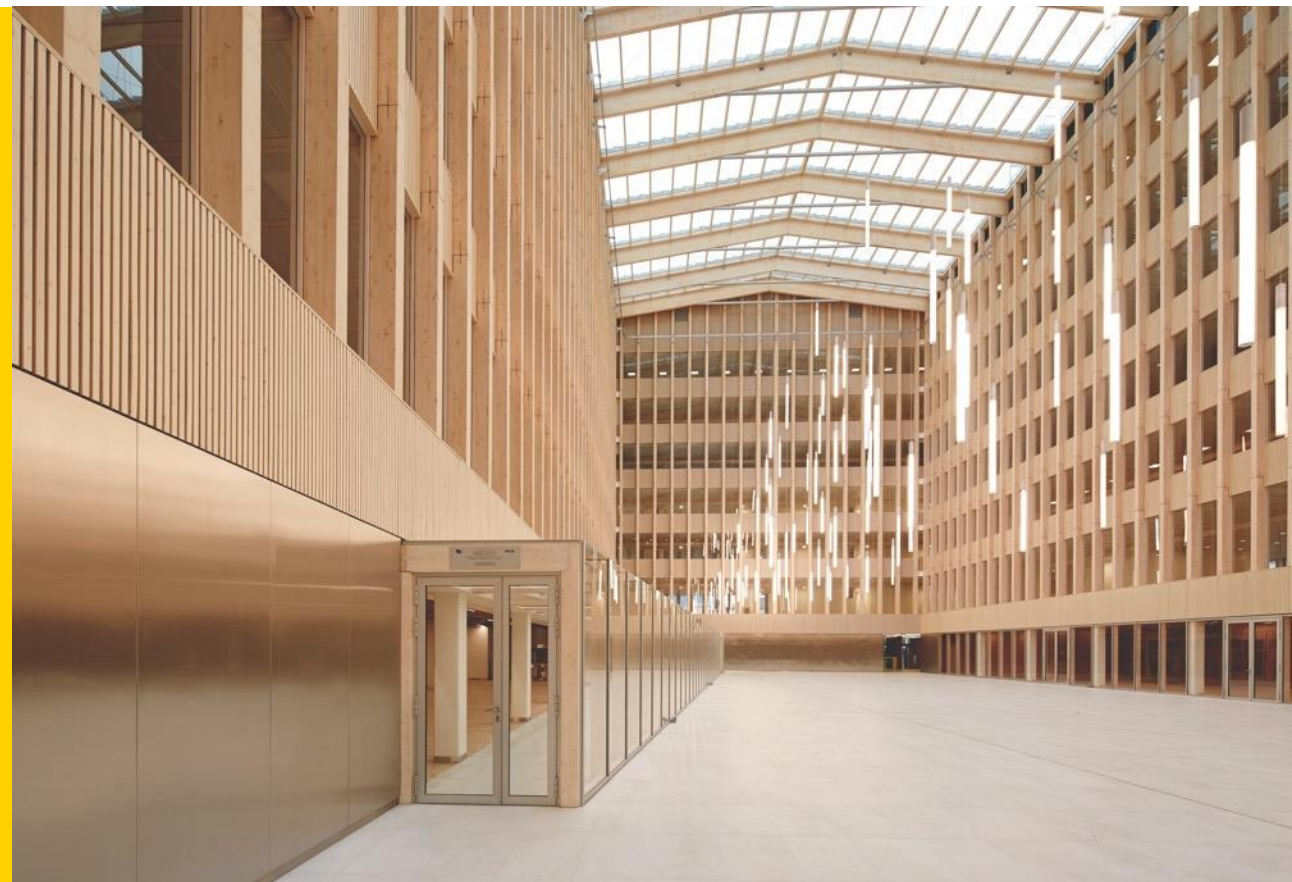
-1 tonne CO₂

vs. concrete

-2.5 tonnes CO₂

vs. steel

We can **significantly cut emissions in the construction sector** by using renewable materials

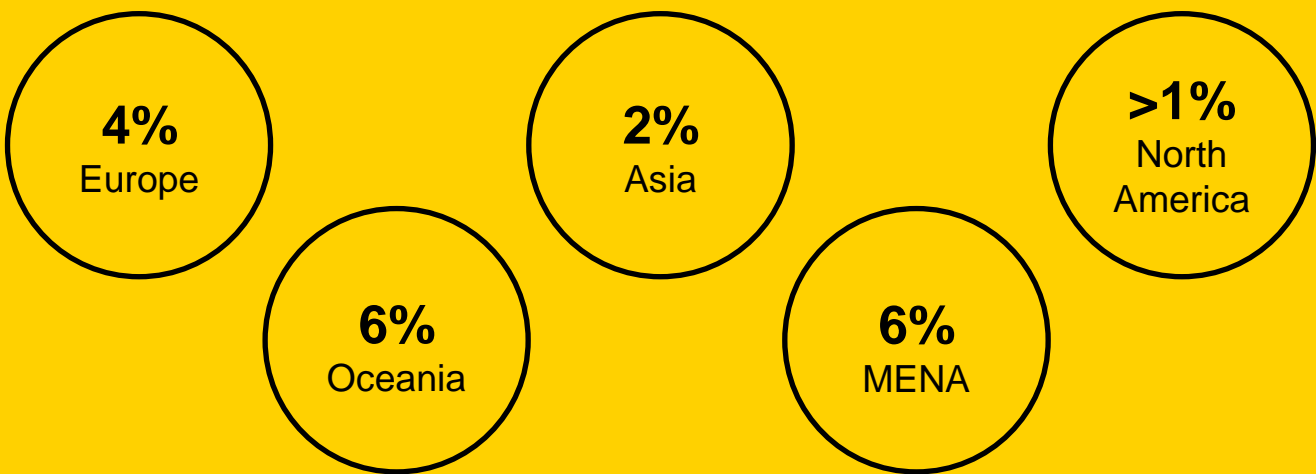


Our market position and sustainability megatrends support our profitable growth ambitions



Traditional wood products markets

Stora Enso's market share (%)



Stora Enso's global CLT market share 2022



Traditional wood products

- Largest supplier of sawn wood in Europe
- Global reach with ~40% sales in overseas markets

Building Solutions

- The world's largest CLT producer
- One of the leaders in LVL in the European market

Leading provider of wood-based building solutions



- Close to strategic European markets
- Industrial infrastructure
- Local supply of raw material

Annual capacity

- Sawing 5.4 million m³
- Further processing 2.5 million m³
- CLT 410,000 m³*
- LVL 85,000 m³
- Pellets 485,000 t

*CLT site (120,000 m³) in Ždírec, Czech Republic, in the ramp-up phase

- Traditional sawing
- CLT production
- LVL production



Traditional wood products: we have improved our profitability and competitiveness for profitable growth

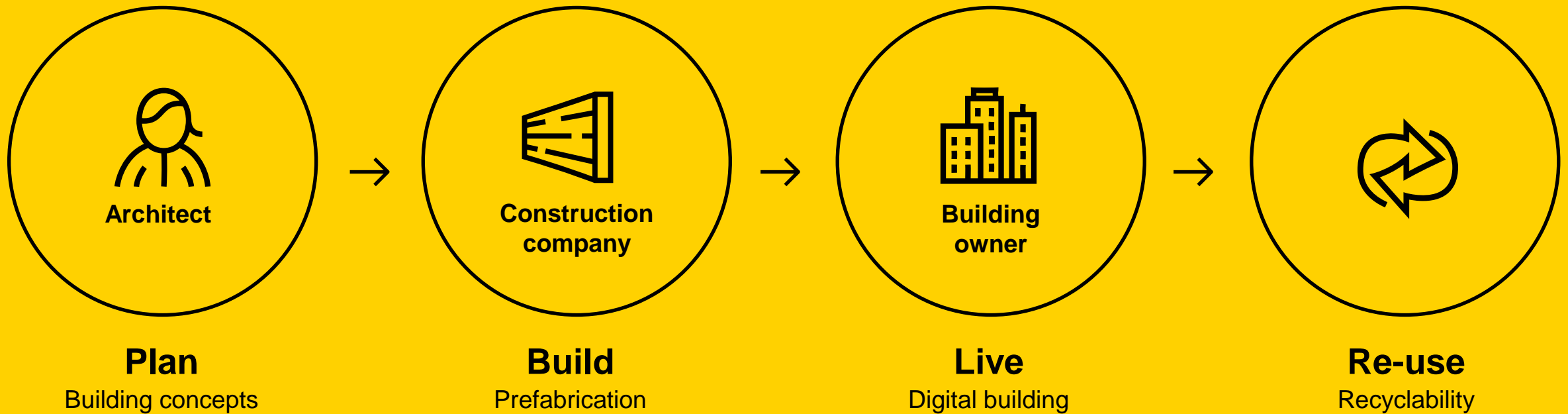


1. Demand growth: megatrend for wooden buildings continues
2. Wood supply: competitive sourcing in Nordics and Central Europe
3. Efficiency: largest operational process efficiency programme completed with main improvements in safety, productivity and raw material efficiency
4. Integration benefits: fiber supply for building solutions and packaging materials

Opportunity for profitable growth: capacity increase



Building Solutions: accelerated profitable growth with solutions across the building lifecycle



Prefabrication example: Fully-finished building elements to reduce manual, costly workload on the construction site



———— **Commodity, off-the-self** ————— **Bespoke, delivered just in time** —————>

Wood Products ~2030 ambition



>40% sales increase*

40% share of Building Solutions

50% scope 3 carbon footprint reduction

+75% operational EBITDA over the cycle*

~25 wind turbine towers delivered

Efficient asset footprint



storaenso

Forest

THE RENEWABLE MATERIALS COMPANY

Forest division in brief



- The division creates value with sustainable forest management, competitive wood supply to Stora Enso's production units, and innovation
- Our forests are the foundation for Stora Enso's renewable offerings
- The division includes our Swedish forest assets and the 41% share of Tornator as well as wood supply operations in Finland, Sweden and the Baltics
- Stora Enso is one of the biggest private forest owners in the world

We create value through our forest assets



~30% self-sufficiency of wood supply from own forest assets and long-term agreements

Secure tactical flexibility through wood sourcing

Operate the largest wood sourcing organisation in the Baltic Sea region

Increased harvesting to secure wood flows to Stora Enso sites

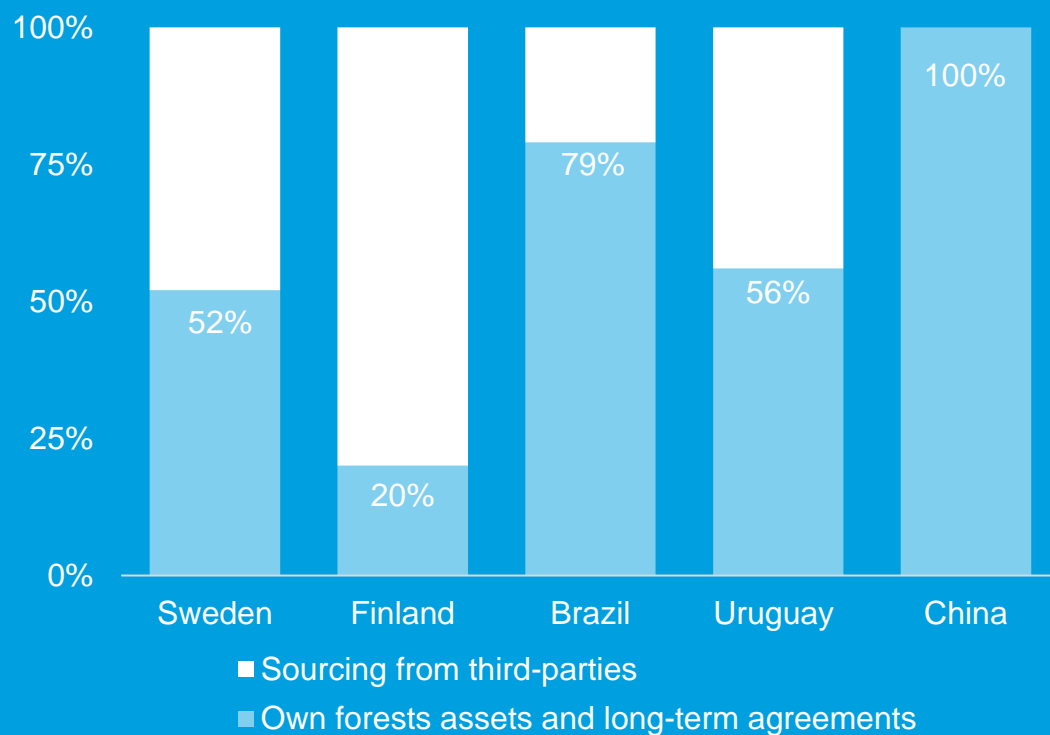
Fiber* 33% of total Group costs



~30% self-sufficiency of wood supply from own forest assets and long-term agreements



Wood self-sufficiency by country in 2022



The forest presents an endless source of value

- Supports a strong balance sheet with increasing value
- Lowers financial and strategic risks
- Foundation for development of sustainable forest management
- Supports our growth strategy through cost efficient wood flows and resource efficiency
- Advances our innovation and R&D work
- Potential for additional revenue streams in renewable energy production (solar and wind)

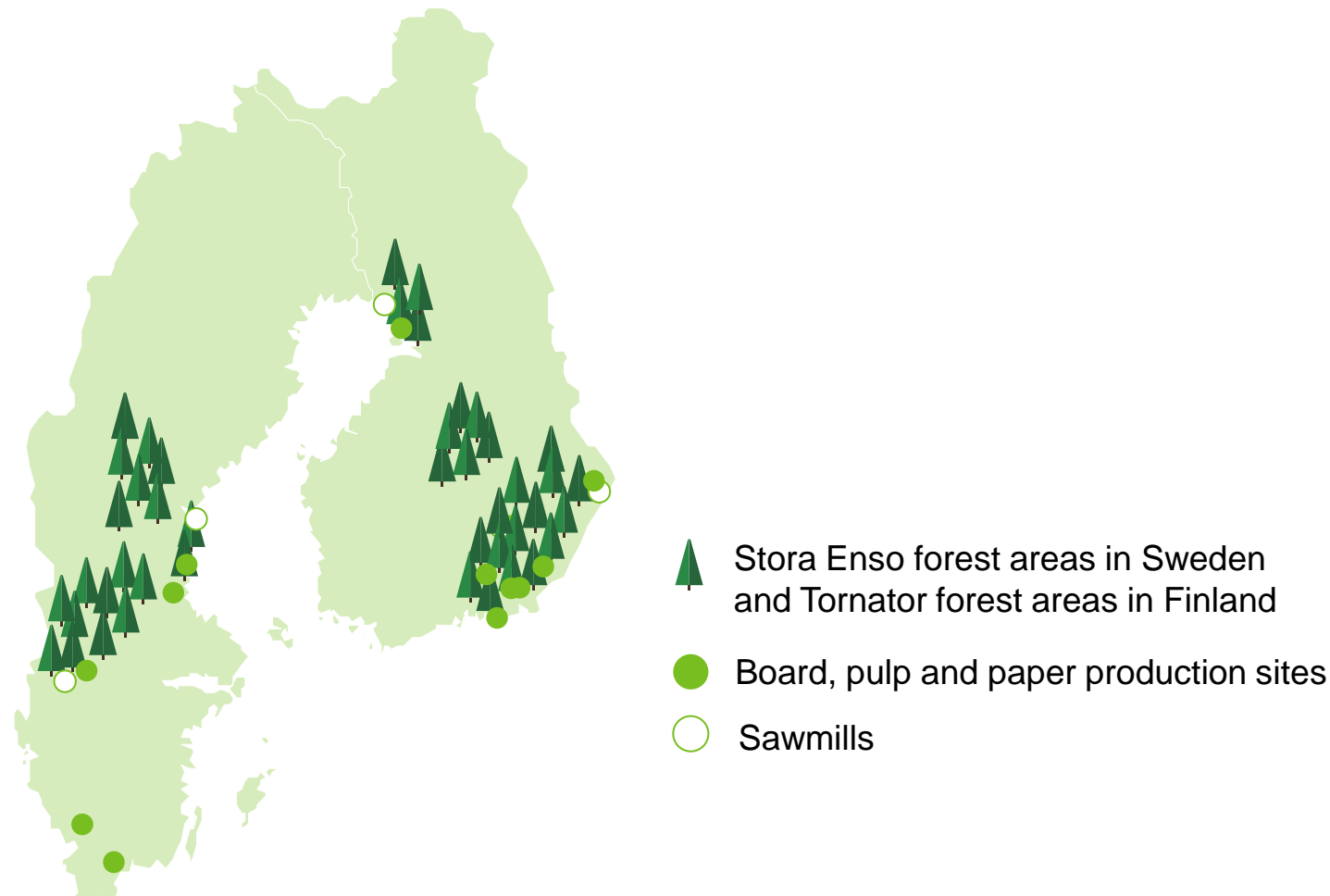


Up to
+15%
increased harvesting
potential in Sweden

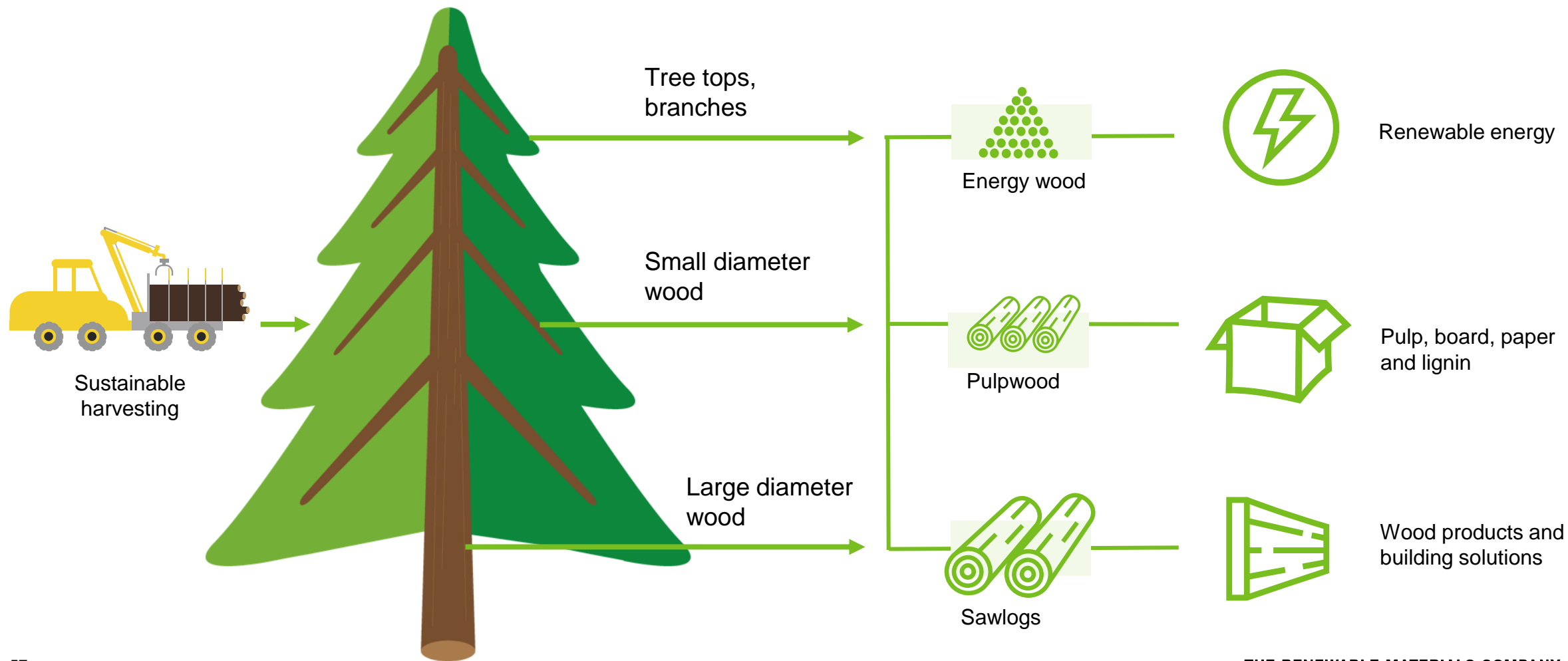
We hold our forest assets close to our production to ensure flexibility and a low carbon footprint



- **Enables further control** of our wood supply
- **Establishes a resilience** to changes in the market environment
- **Secures availability** and lowers wood costs for the Group
- **Provides tactical flexibility** in wood supply
- **Minimises** the logistical **carbon footprint** and **lowers transportation cost**



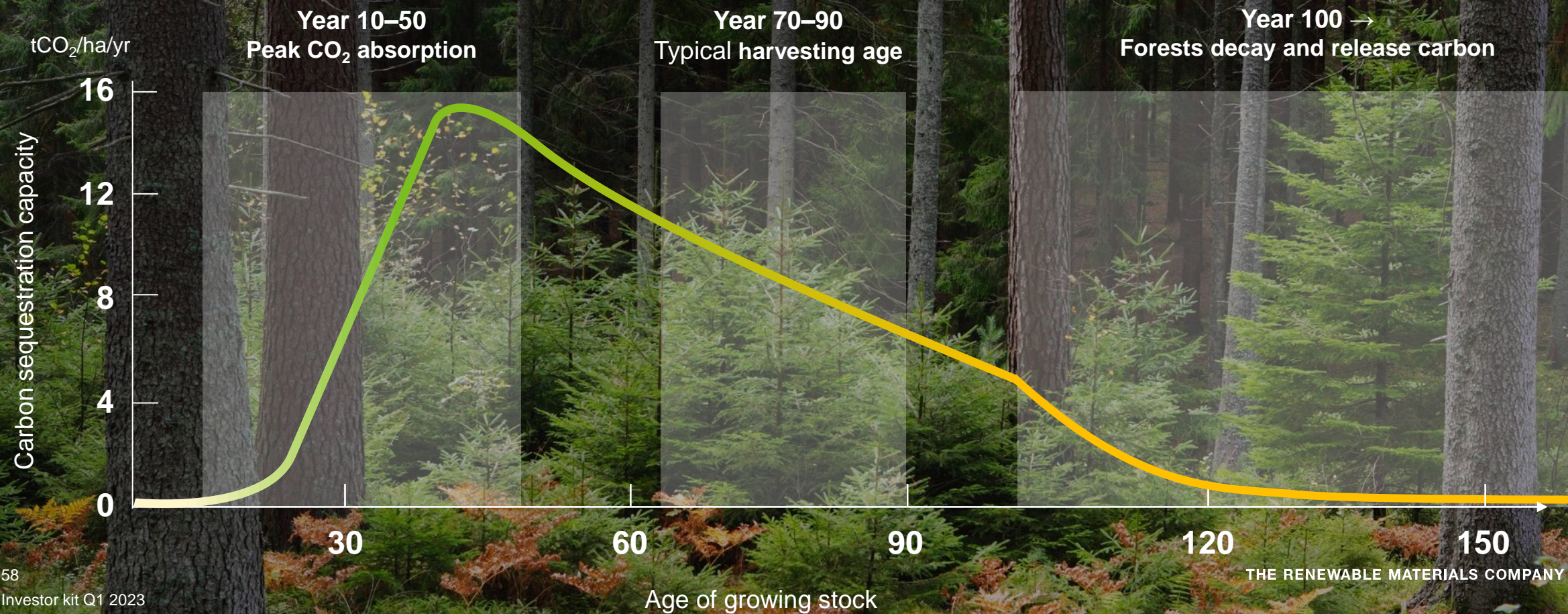
We use all parts of each harvested tree ensuring optimal use



Only growing forests remove CO₂



Carbon sequestration capacity of growing stock



We are committed to step up our work to safeguard biodiversity



storaenso



Precision forestry enables a more and efficient forest management



Active land management provides new revenue streams



Active landowner

Selected land sales
Land swaps to optimise the land holdings

Wind power

Land leasing
Expansion potential

Other revenue streams

Hunting licences and fishing rights
Gravel sales

Future potential

Carbon credits
Solar power

Wind power opportunities are emerging



Our ambition is to **develop and significantly increase** our involvement in wind energy

The **total potential for wind power production** on Stora Enso's land in Sweden is estimated to **75 TWh**

~30% of this potential **can be realised long term**

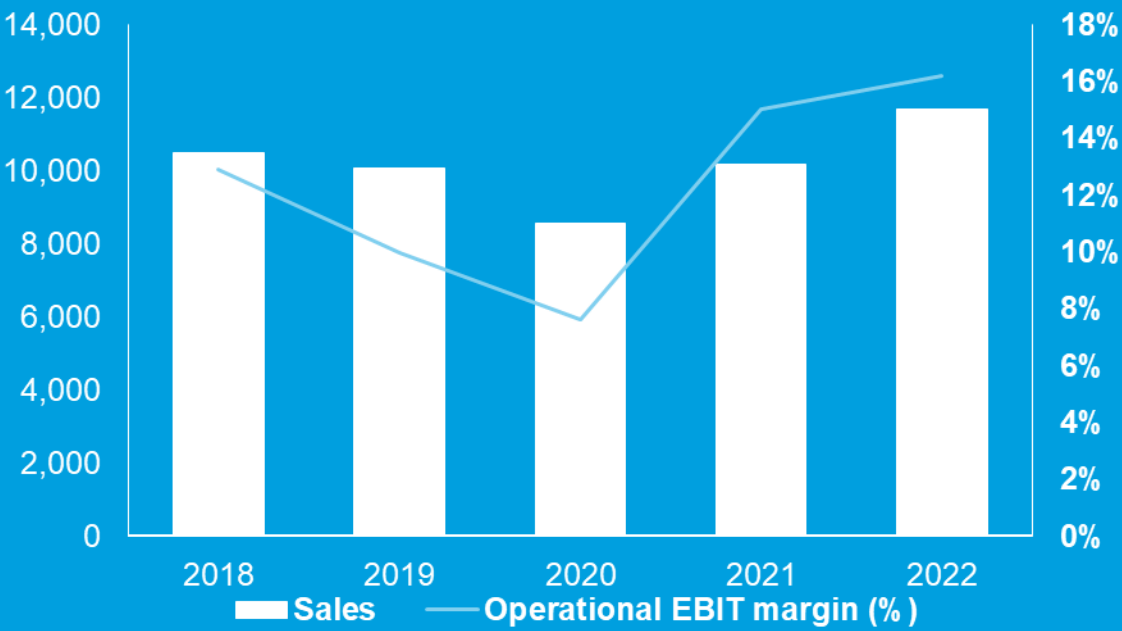
Our ambition is to have **5-10 TWh of wind power production in place by 2030** (~5% of Sweden's total electricity demand)

Group's financial performance, dividend policy, ownership and top management

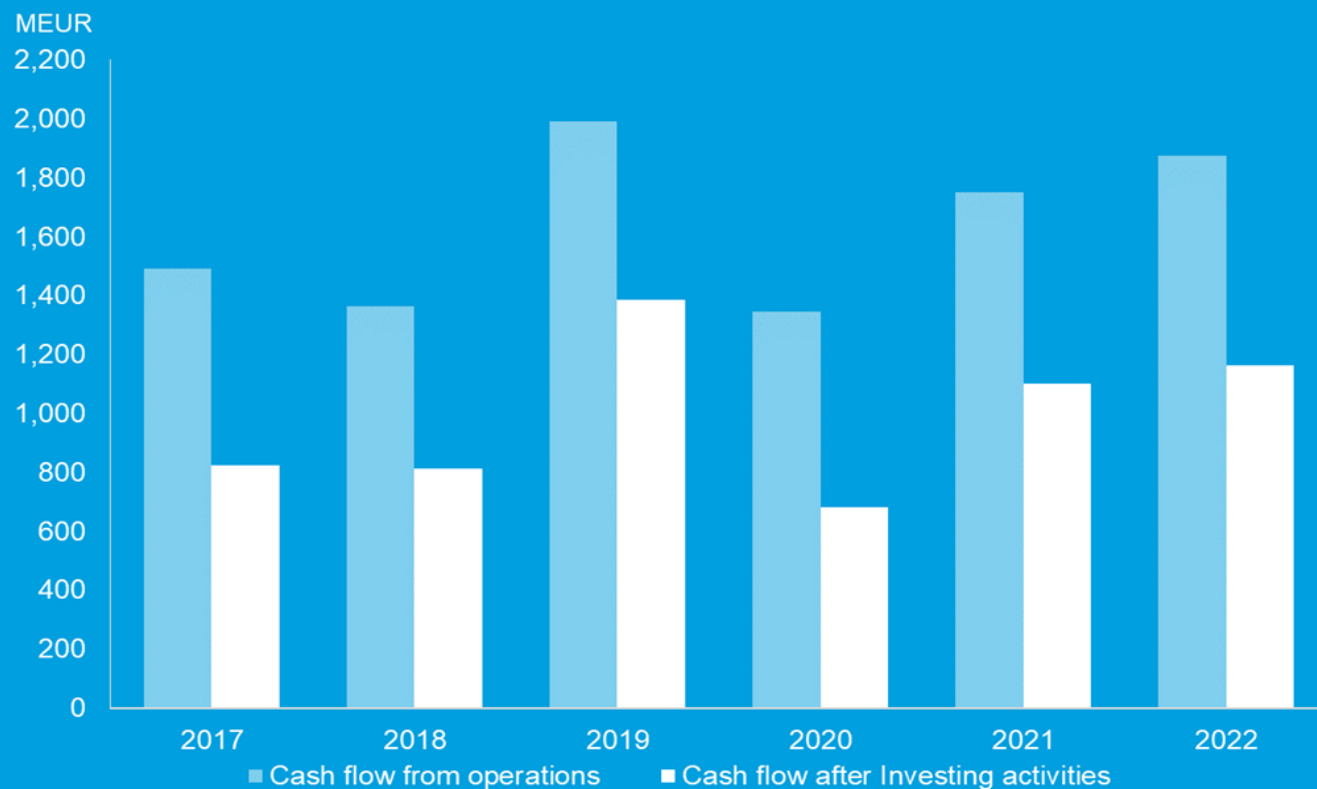
We are protecting our margins by building a less cyclical business



- Growing in three focus areas in renewable materials
- High self-sufficiency of wood and energy
- Reduce our market pulp position significantly
- Divesting Paper
- Developing new revenue streams



Strong cash flow generation over the cycles

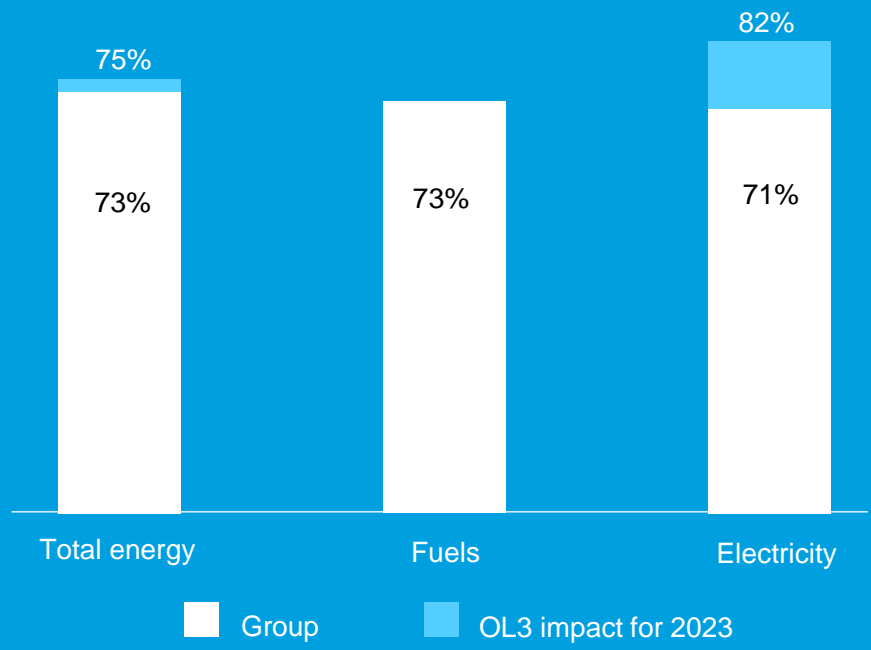


- Stora Enso continues to deliver strong cash flow
- Cash flow from operations increased to €1,873 (€1,752) million in 2022
- Cash flow after investing activities was €1,162 (1,101) million in 2022

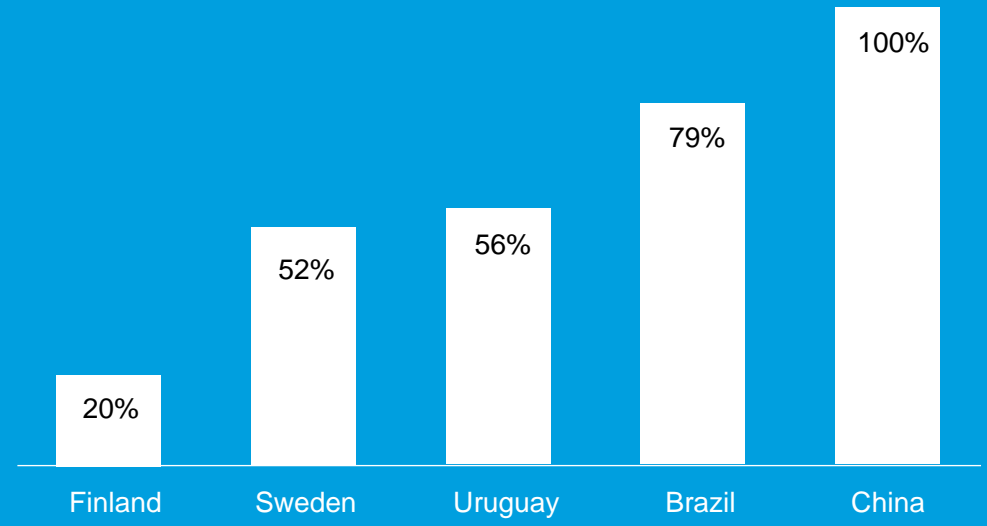
Start-up of the Olkiluoto 3 nuclear power plant increases Group's energy self-sufficiency to 75%



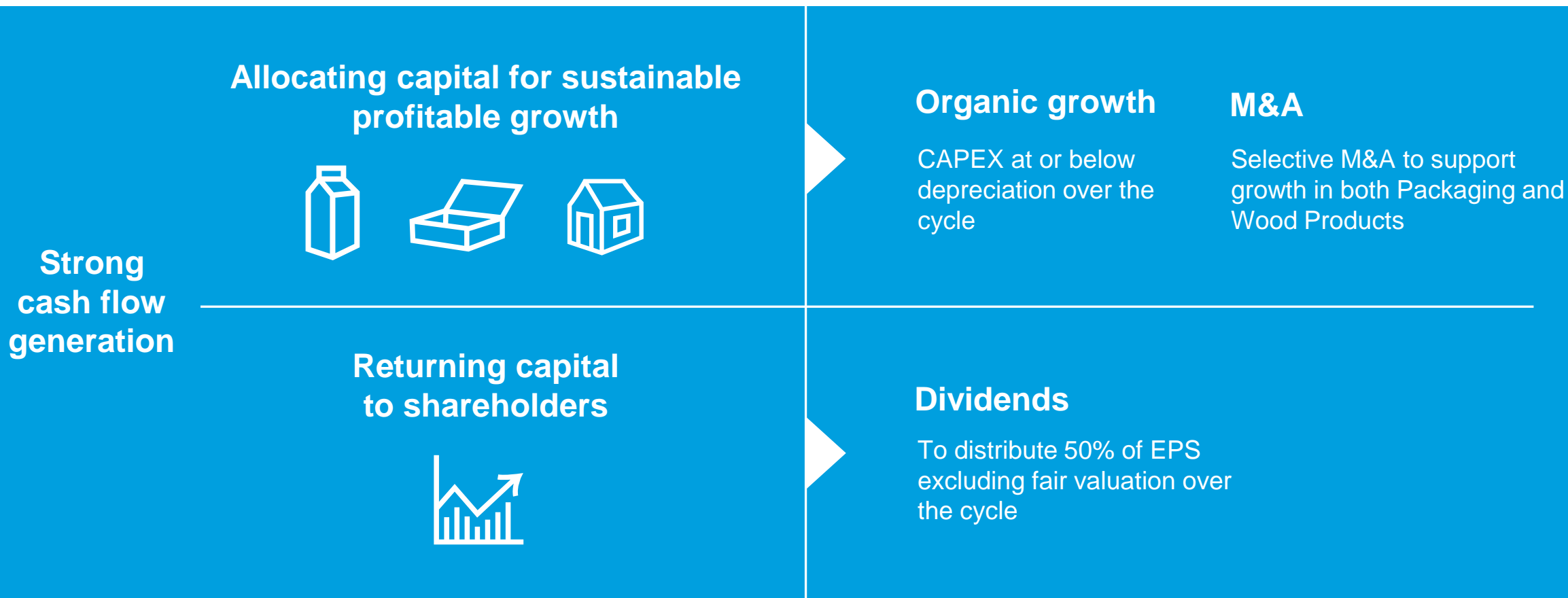
Group energy self-sufficiency excl. JVs (2023e)



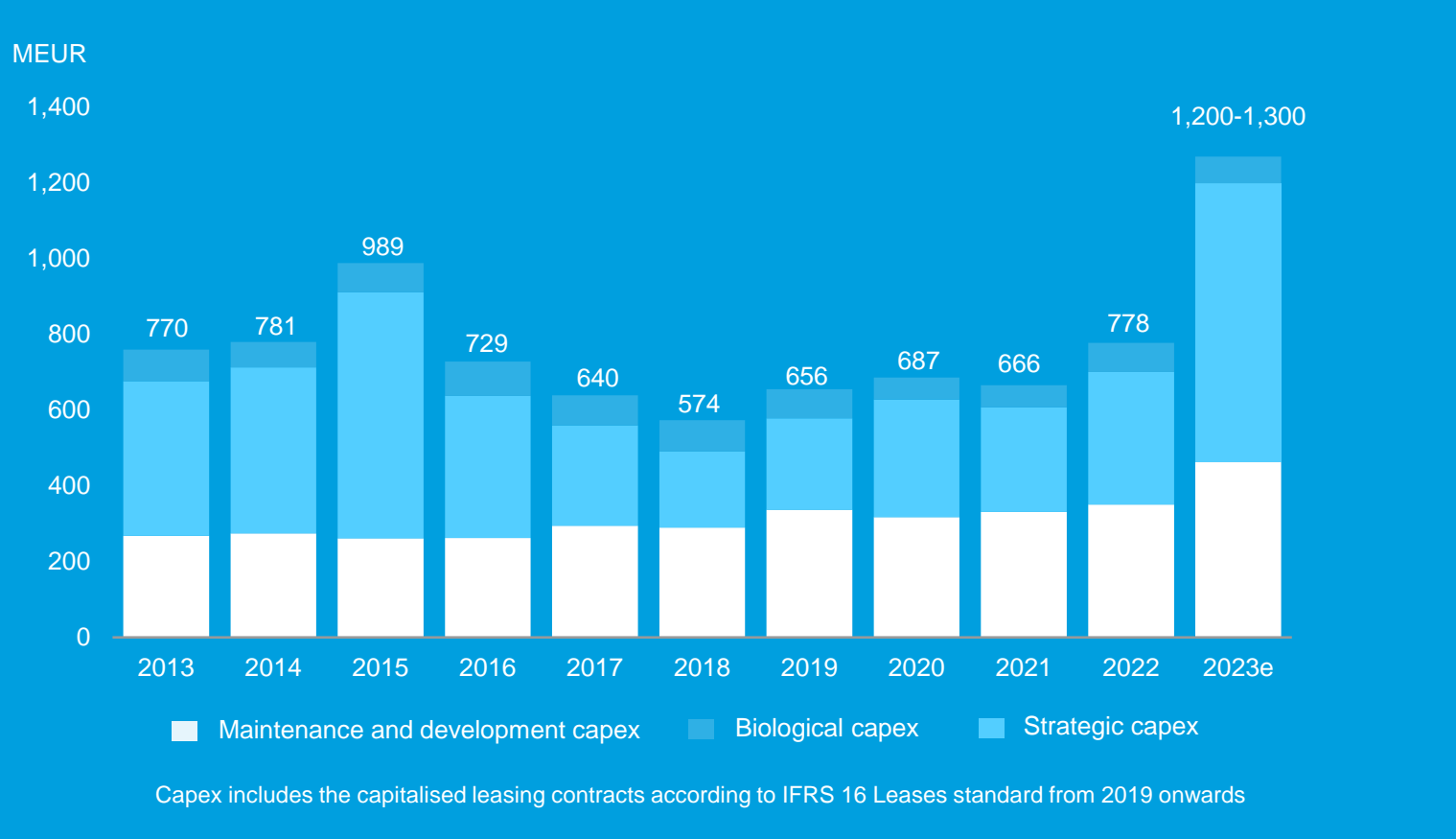
Group wood self-sufficiency by country (2022)



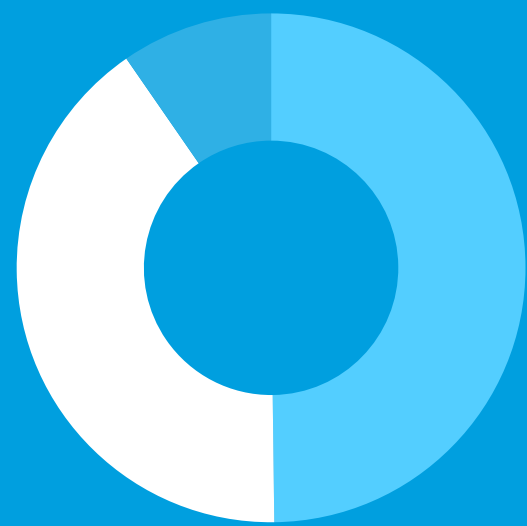
We drive shareholder value through a focused and disciplined capital allocation



Higher capex estimate mainly due to growth investments in consumer board



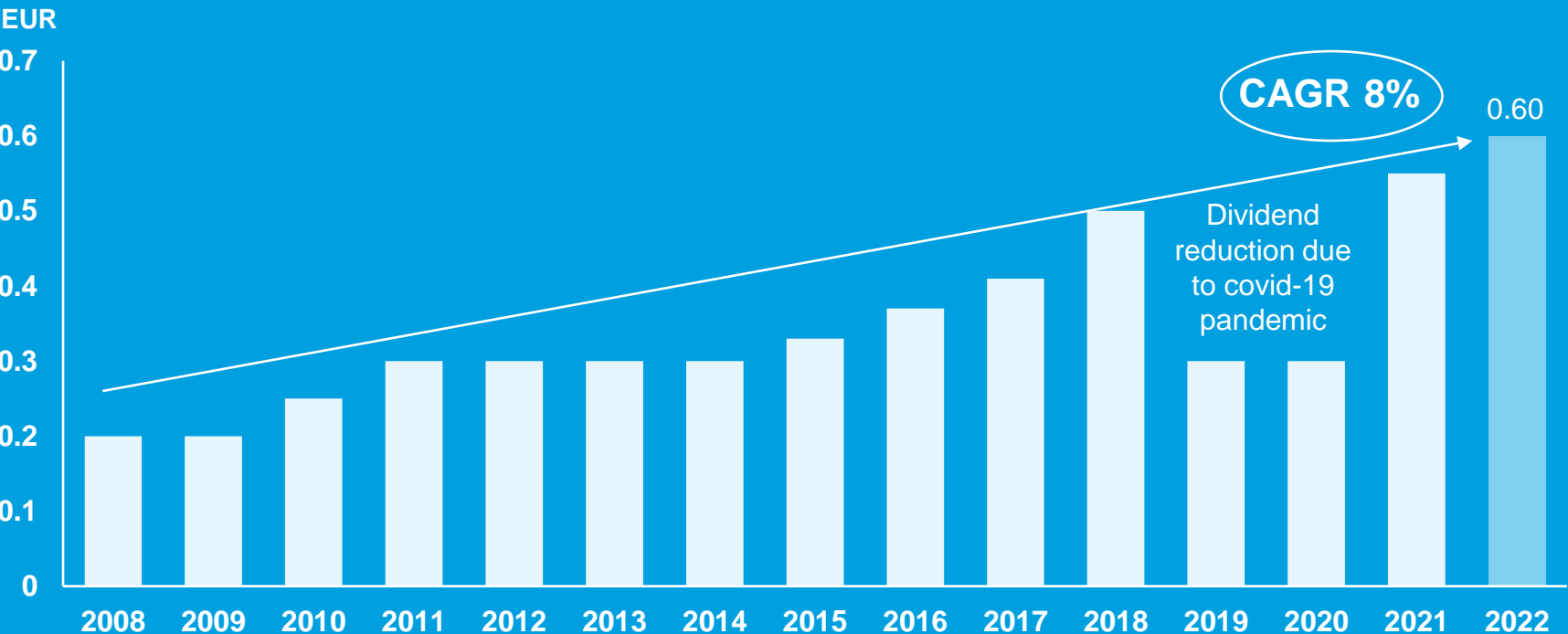
Average capex split for 2013–2023
Depending on investment decisions



Dividend was increased to an all time high of €0.60 per share

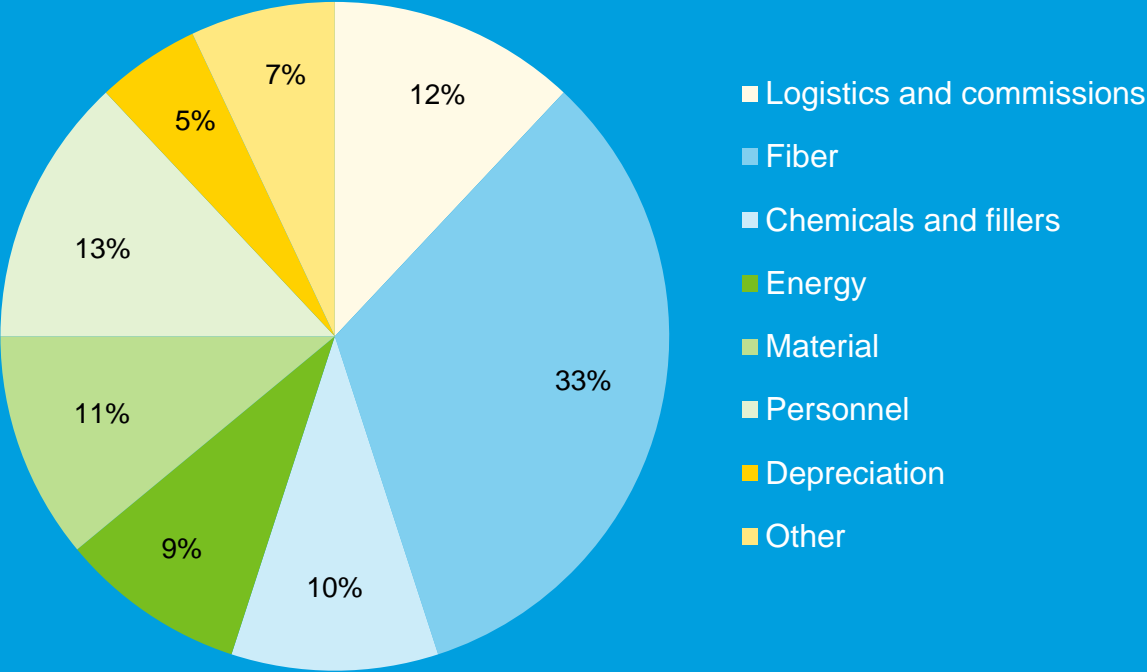


Dividend



Target:
50% of EPS
excluding fair
valuation over
the cycle

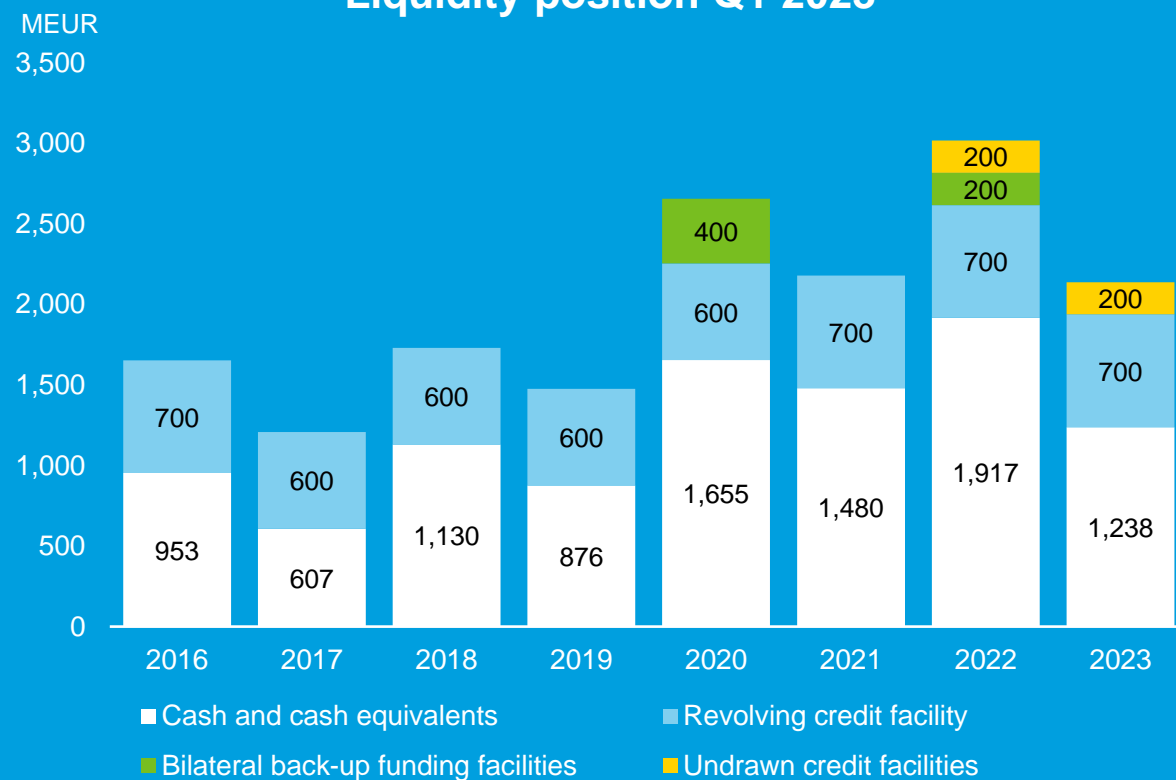
Cost structure in 2022



Continued solid liquidity position

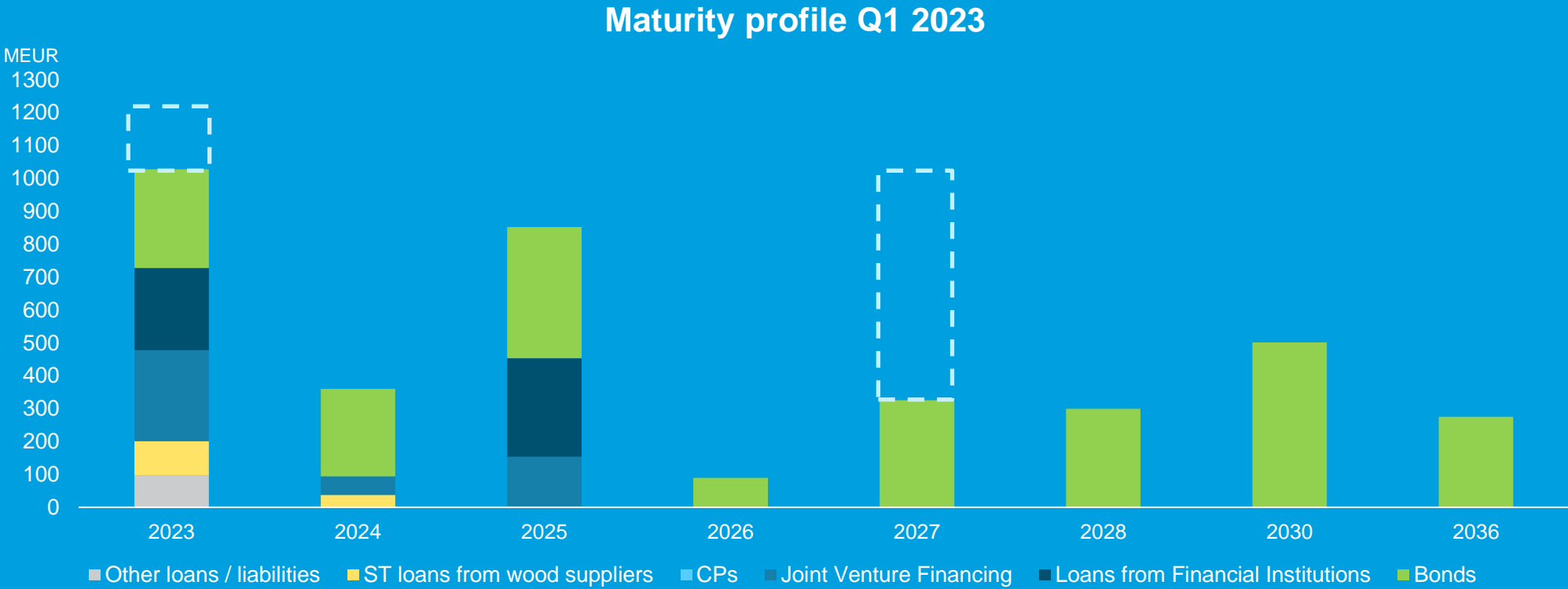


Liquidity position Q1 2023



- Liquidity at the end of Q1 2023:
 - €1,238m cash and cash equivalents
 - €700m committed revolving credit facility fully undrawn
 - €200m committed credit facilities fully undrawn
 - €1,050m statutory pension premium loans available
- No financial covenants on Stora Enso Oyj's debt
- Net debt to operational EBITDA at 1.3x and net debt/equity ratio at 25%

Maturity profile at the end of quarter



Committed credit facilities are fully undrawn and mature in 2023 and 2027 (€ 900 million in total).

Permanent pulp, paper and board capacity reductions since 2006



Site	Date	Grade	Capacity reduction, t
Corbehem PM 3 and PM 4	Jun 2006	LWC	250,000
Varkaus PM 1	End 2006	WFC	95,000
Berghuizer Mill	Oct 2007	WFU	235,000
Reisholz Mill	End 2007	SC	215,000
Summa Mill	Jan 2008	Newsprint, uncoated mag, book paper	415,000
Anjala Mill PM1	Feb 2008	Coated magazine paper	155,000
Baiefurt Mill	End 2008	FBB	190,000
Kabel Mill PM 3	End 2008	Coated magazine	140,000
Kemijärvi Pulp Mill	April 2008	Long-fibre (SW) pulp	250,000
Norrsundet Pulp Mill	Dec 2008	Long-fibre (SW), pulp	300,000
Varkaus Mill coreboard machine	Dec 2008	Coreboard	100,000
Imatra PM 8	Mar 2010	WFU	210,000
Varkaus PM 2 and PM 4	Sep 2010	Newsprint, directory paper	290,000
Maxau PM 7	Nov 2010	Newsprint	195,000

PM = Paper machine

Site	Date	Grade	Capacity reduction, t
Hylte PM1	Dec 2012	Newsprint	180,000
Ostroleka PM2	Jan 2013	Containerboard	85,000
Hylte PM2	May 2013	Newsprint	205,000
Kvarnsveden PM11	May 2013	Newsprint	270,000
Veitsiluoto PM1	Apr 2014	Coated magazine	190,000
Corbehem Mill	July 2014	LWC	330,000
Varkaus	Aug 2015	WFU	280,000
Suzhou	Jun 2016	WFU	240,000
Kvarnsveden PM8	Jun 2017	SC	100,000
Imatra PM 6	End of 2019	Coated spec.	90,000
Oulu PM 6 and PM7	Sep 2020	WFC	1,080,000
Hylte PM3	Dec 2020	News	235,000
Kvarnsveden site	Q3 2021	SC, impr. News, packaging paper	565,000
Veitsiluoto site	Q3 2021	LWC, MWC, WFU, speciality paper, packaging paper	790,000
Total*			7,680,000

*One of the two paper machines (250kt) in Anjala to be closed in Q4 2023

Permanent sawn wood capacity reductions since 2006



Site	Date	Capacity reduction, m ³
Veitsiluoto Sawmill	2006	100,000
Honkalahti Sawmill	2006	90,000
Sauga Sawmill	2007	130,000
Sollenau Sawmill	2007	110,000
Näpi Sawmill	2007-2008	100,000
Kotka Sawmill	2007-2008	70,000
Paikuse Sawmill	2008	220,000
Zdirec Sawmill	2008	120,000
Ybbs Sawmill	2008 & 2009	200,000
Kitee Sawmill	2008 & 2009	130,000
Varkaus Sawmill	2009	60,000
Tolkkinen Sawmill	2009	260,000
Kopparfors Sawmill	2011	310,000
Sollenau Sawmill	2014	400,000
Kitee	2019	260,000
Total		2,560,000

Ownership distribution at the end of Q1 2023



	% of shares	% of votes
■ Solidium Oy*	10.7%	27.3%
■ FAM AB	10.2%	27.3%
■ Social Insurance Institution of Finland (KELA)	3.0%	10.0%
■ Finnish institutions (excl. Solidium and KELA)	10.1%	7.8%
■ Swedish institutions (excl. FAM)	1.6%	1.0%
■ Finnish private shareholders	4.2%	2.5%
■ Swedish private shareholders	3.1%	2.3%
■ ADR holders	1.6%	0.5%
■ Under nominee names (non-Finnish/non-Swedish shareholders)	55.5%	21.3%

* Entirely owned by the Finnish State

Major shareholders at the end of Q1 2023



By voting power	A shares	R shares	% of shares	% of votes
1 Solidium Oyj*	62,655,036	21,792,540	10.7	27.3
2 FAM AB**	63,123,386	17,000,000	10.2	27.3
3 Social Insurance Institution of Finland (KELA)	23,825,086	0	3.0	10.0
4 Ilmarinen Mutual Pension Insurance Company	4,159,992	14,400,000	2.4	2.4
5 Vama Mutual Pension Insurance Company	5,163,018	1,140,874	0.8	2.2
6 MP-Bolagen i Vetlanda AB**	4,885,000	1,000,000	0.7	2.1
7 Elo Mutual Pension Insurance Company	2,010,000	7,755,000	1.2	1.2
8 Bergslaget's Healthcare Foundation	626,269	1,609,483	0.3	0.3
9 The State Pension Fund		5,000,000	0.6	0.2
10 SEB Investment management	0	4,705,130	0.6	0.2
11 The Society of Swedish Literature in Finland	0	3,000,000	0.4	0.1
12 Avanza Pension Insurance	140,930	1,381,288	0.2	0.1
13 Afa Insurance	0	2,393,876	0.3	0.1
14 Unionen (Swedish trade union)	0	2,312,750	0.3	0.1
15 Nordea Pro Finland Fund	0	1,775,614	0.2	0.1
16 Danske Invest Finnis Equity Fund	0	1,700,000	0.2	0.1
17 OP Finland Value	0	1,699,753	0.2	0.1
18 Investment fund Seligson & Co OMXH25	0	1,360,961	0.2	0.1
19 SEB-Stiftelsen, Skandelska	0	1,250,000	0.2	0.1
20 EVLI Finland Select Fund	0	1,190,000	0.2	0.1
20 largest total	166,588,717	92,467,269	32.9	74.2

*Entirely owned by the Finnish State. **As confirmed to Stora Enso.

List has been compiled by the company, based upon shareholder information from Euroclear Finland Oy and Euroclear Sweden AB share registers and a database managed by Citibank, N.A. (as the company's ADR agent bank). This information includes only direct registered holdings, thus certain holdings (which may be substantial) of ordinary shares and ADRs held in nominee or brokerage accounts can not be included. The list is therefore incomplete.

Sponsored ADR Programme



Stora Enso has a sponsored Level I ADR programme in the US. The ADRs trade on the premier tier of Over-The-Counter (“OTC”) market. Details are as follows:

Ticker Symbol	SEOAY
CUSIP	86210M106
Ratio	1 ADR : 1 Ordinary Shares
ADR depositary	Citibank

Share price information www.citi.com/DR or www.otcqx.com

Contact information for Stora Enso ADR holders:

Citibank Shareholder Services

Computershare

P.O. Box 43077

Providence, Rhode Island 02940-3077

Email: citibank@shareholders-online.com

Direct dial: (781) 575-4555

Group Leadership Team



**President
and CEO**
Annica
Bresky



**CFO,
Acting Head
of Paper**
Seppo
Parvi



**Chief
Strategy and
Innovation
Officer**
Tobias
Bäärnman



**Packaging
Solutions**
David
Ekberg



Biomaterials
Johanna
Hagelberg



**Brand and
Communication**
René Hansen



**Packaging
Materials**
Hannu
Kasurinen



HR
Katariina
Kravi



Forest
Per
Lyrvall



Sustainability
Annette
Stube



Wood Products
Lars Völkel



Sourcing & Logistics
Minna Björkman

Board of Directors



Antti Mäkinen
Chair



Håkan Buskhe
Vice Chair



Elisabet Fleuriot



Astrid Hermann



Helena Hedblom



Kari Jordan



Christiane Kuehne



Richard Nilsson



Hans Sohlström

Forest assets and fair valuation

Stora Enso's global forest assets' fair values and valuation methodology by region

Group forest assets fair value at €8.3 billion or €10.49 per share in Q1 2023

All figures total forest assets including biological assets and forest land*

Group forest assets
Biological assets: €5.6 billion
Forest land*: €2.6 billion

99% certified wood
from own forests

Sweden
€6.0 billion

(Market transaction-based fair value)
(Q1 23)

Tornator (41%)
€1.3 billion

(Market transaction-based fair value)
(Q1 23)

Montes del Plata (50%)
€484m

(DCF) (Q1 23)

Veracel (50%)
€140m

(DCF) (Q1 23)

Guangxi
€342m

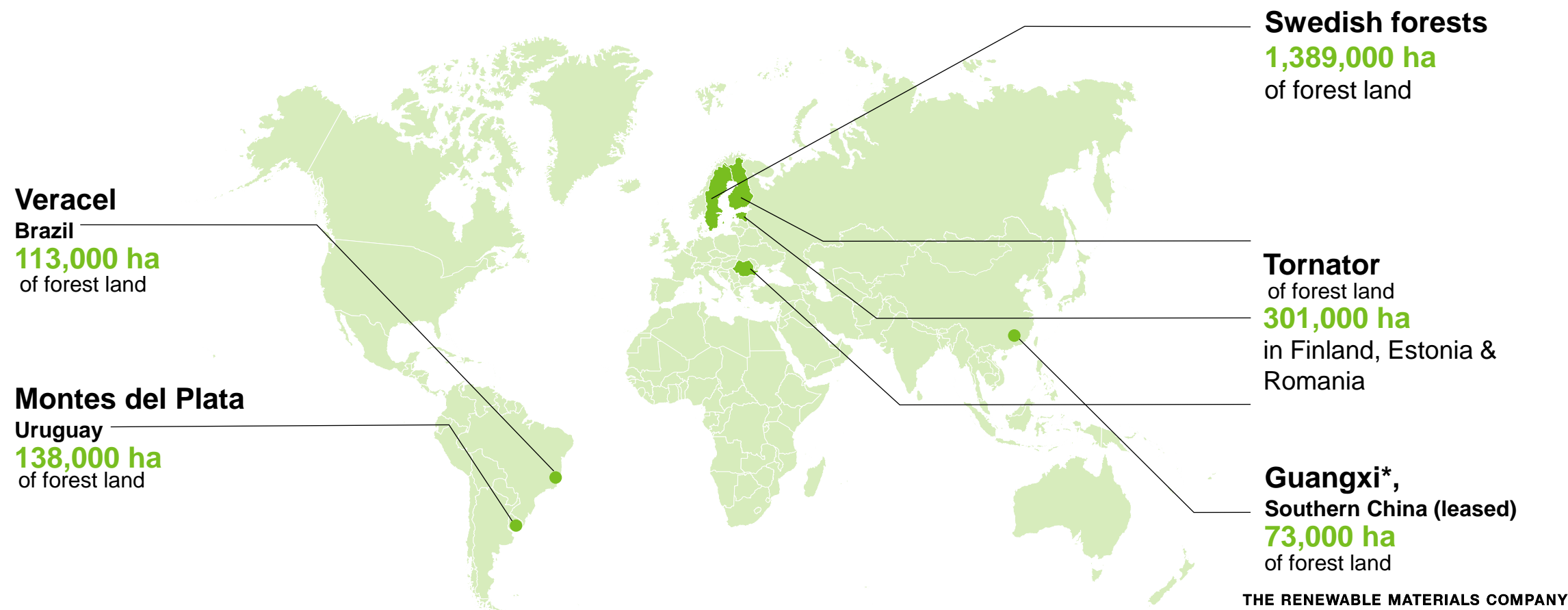
(DCF) (Q1 23)

*including leased land

We are a leader in sustainable forest management across one of the world's largest private forest estates

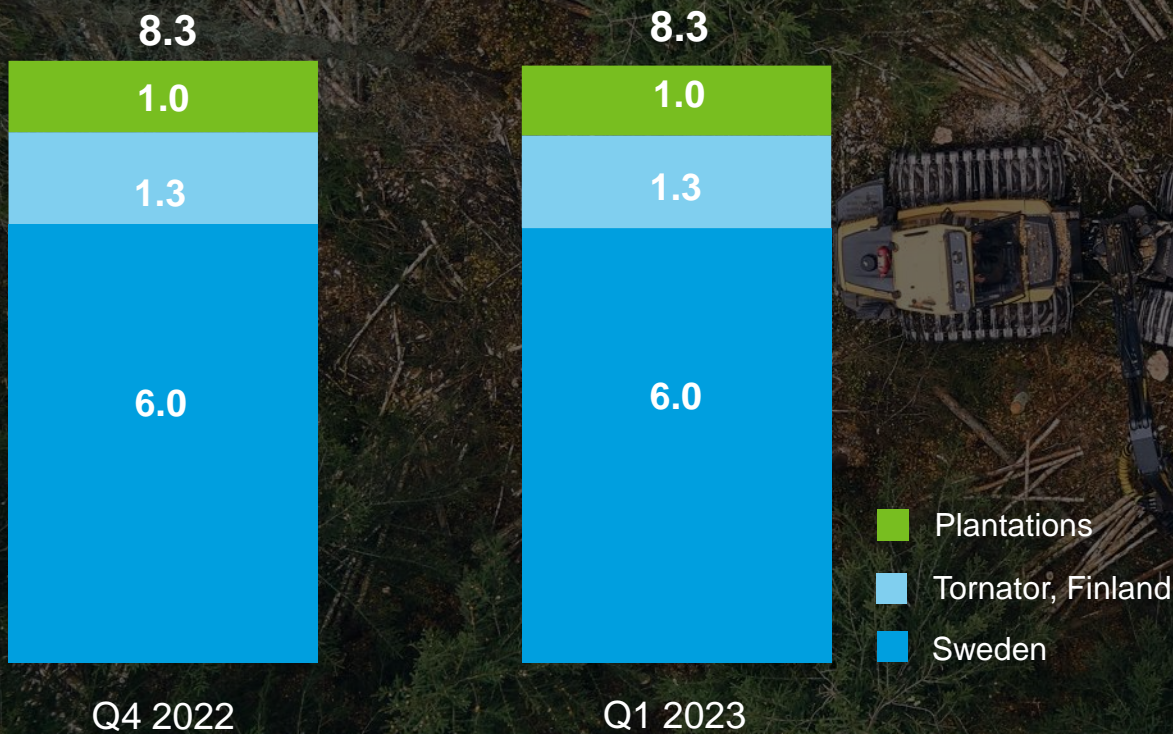


~30% self-sufficiency of wood supply from own forest assets and long-term agreements



Biannual market transaction-based fair valuation in Sweden and Finland

Group forest assets BEUR



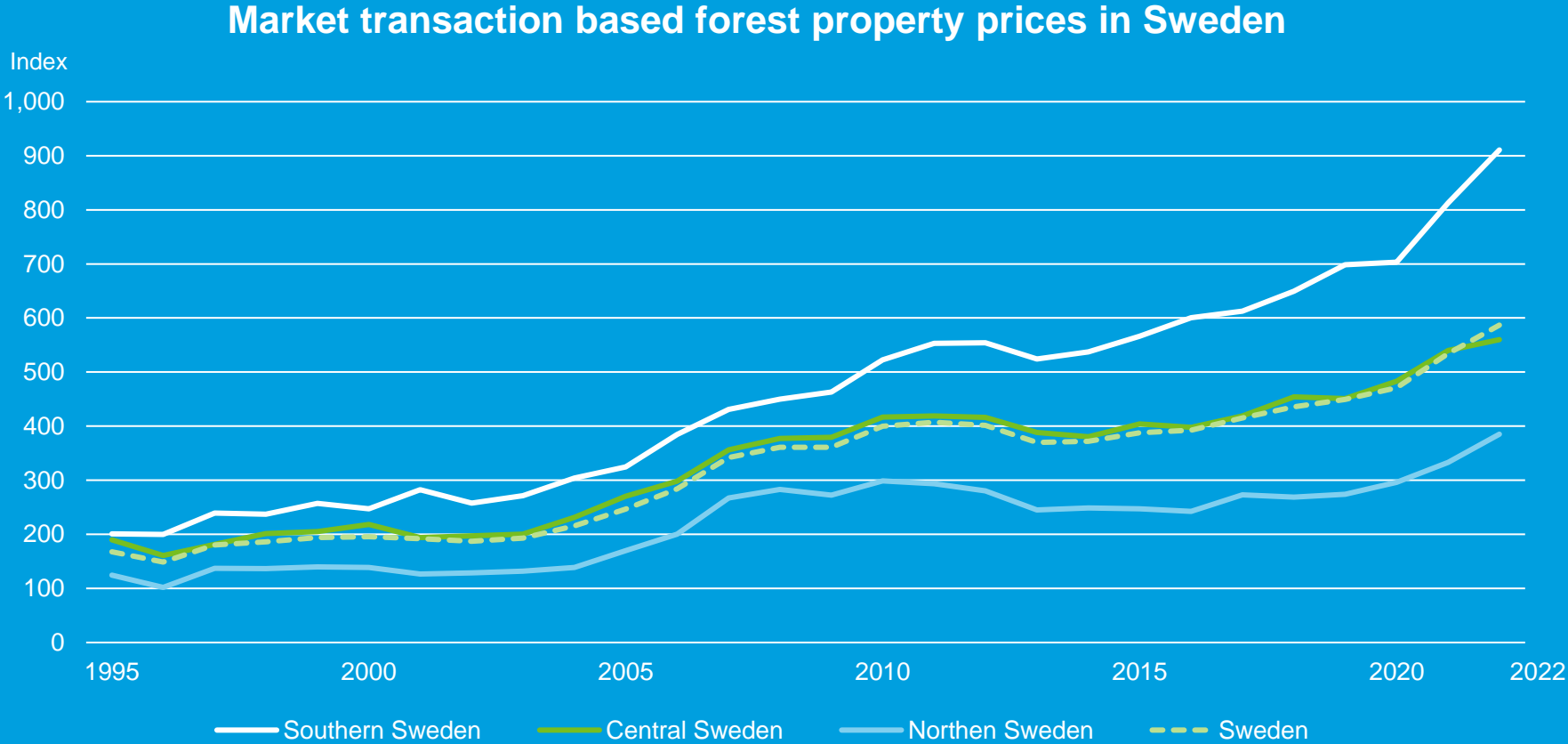
Sweden and Finland

- Market transactions from our forest regions
- Volume weighted three year average transactions
- Standing stock and price data of the traded forest
- Biannual valuation process

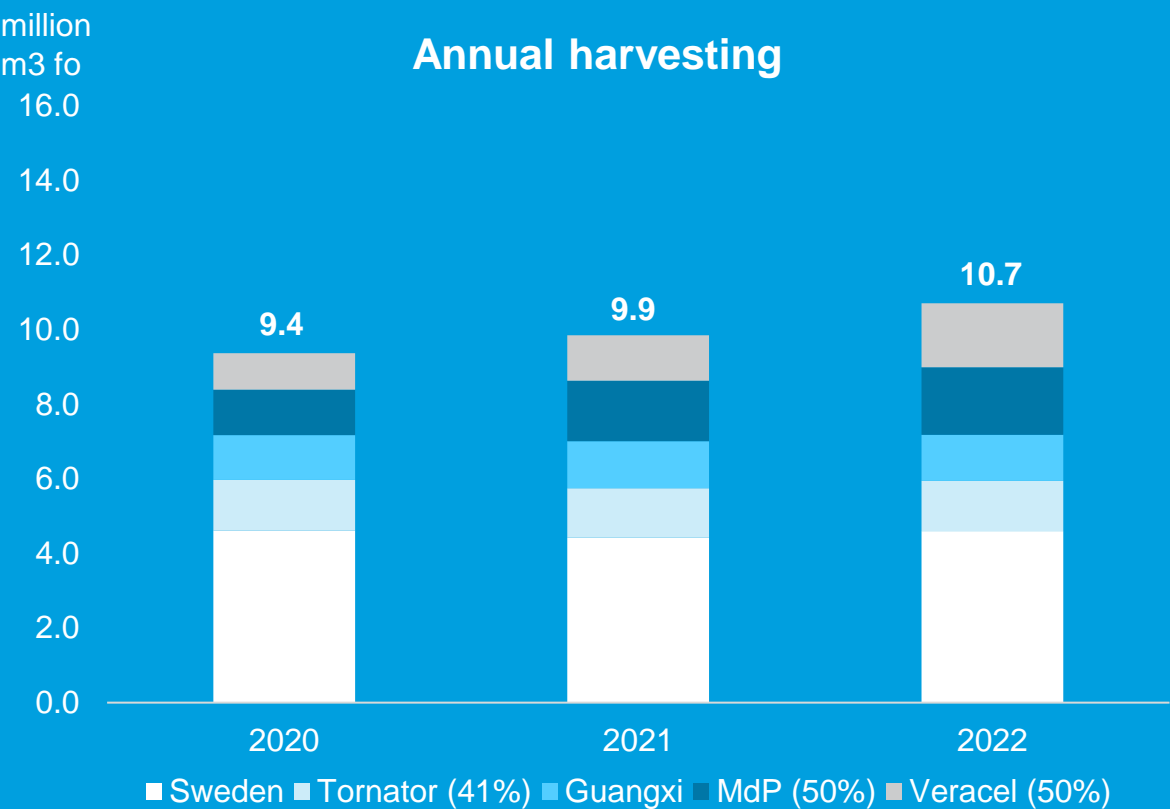
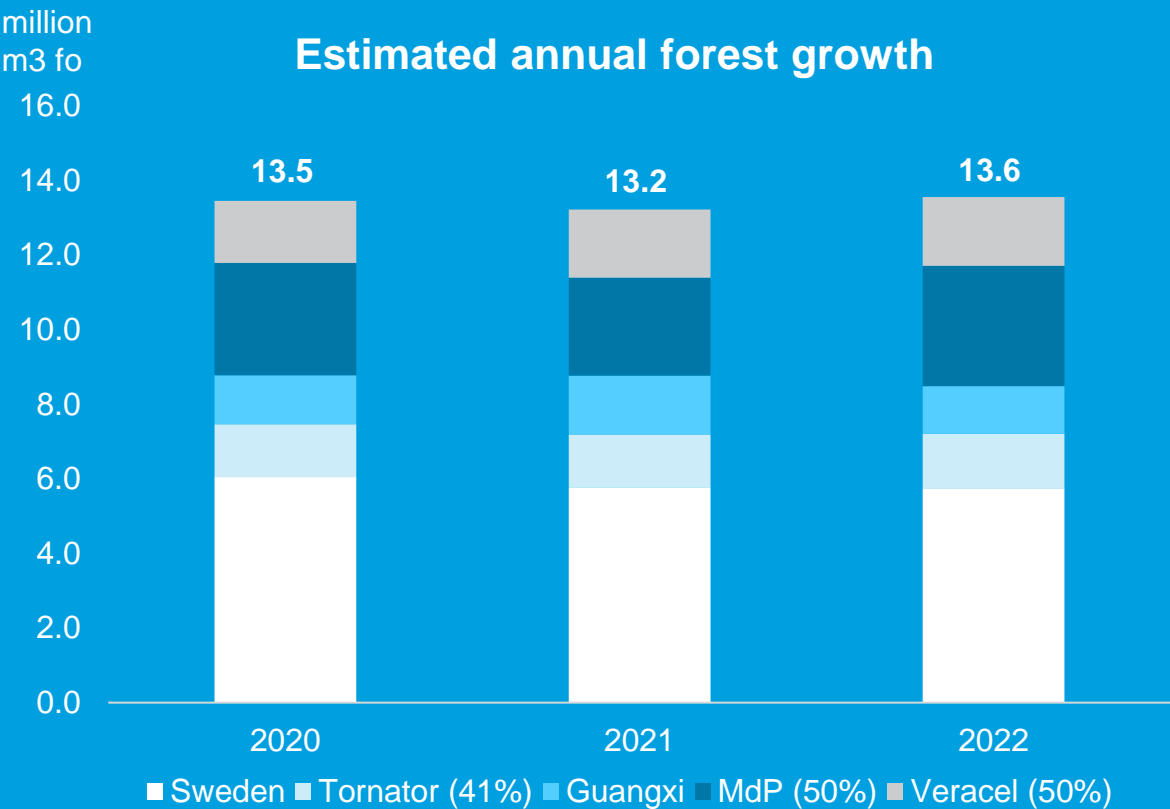
Plantations

- DCF method
- Forest land at historical cost

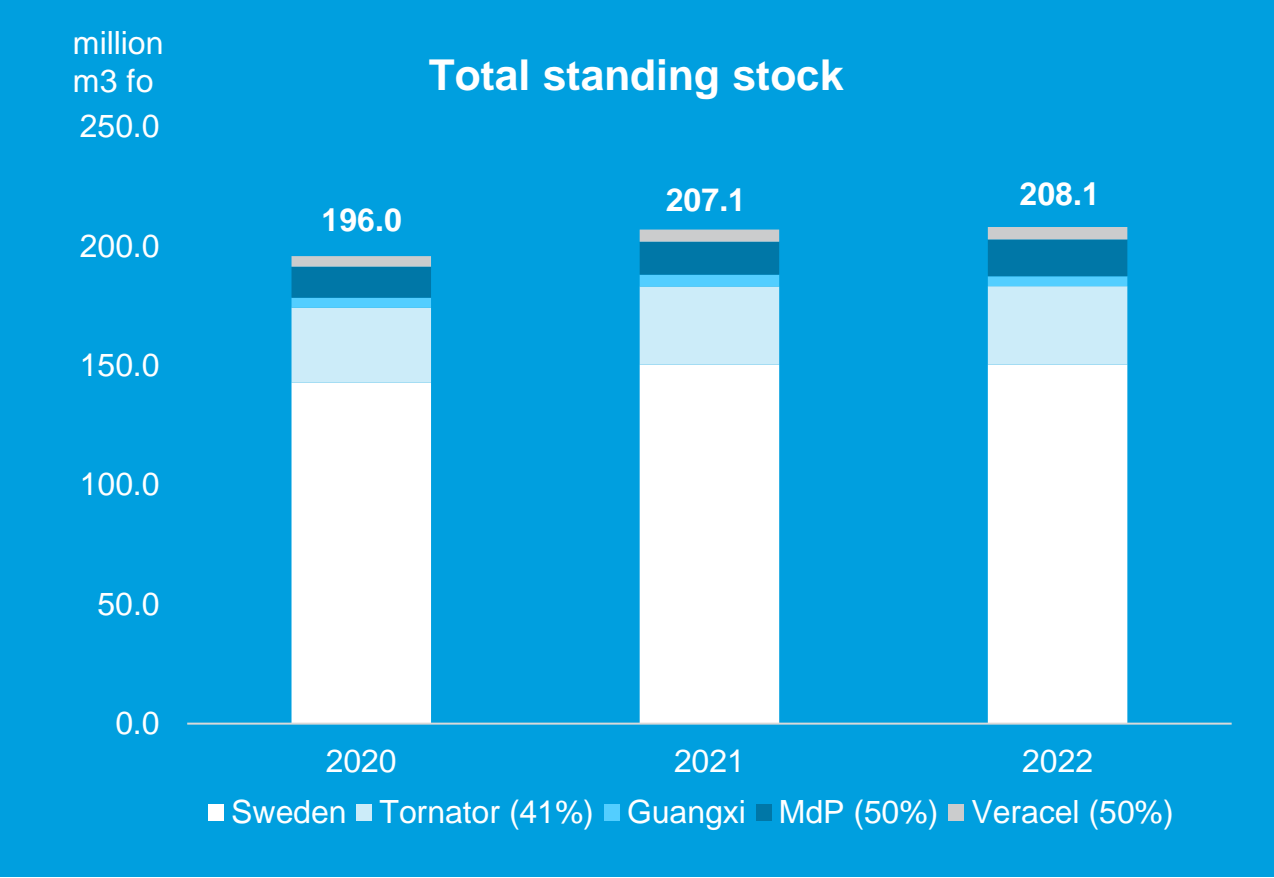
Market transaction prices continued to increase in 2022



Annual harvesting represented 79% of the forest growth in 2022



Increasing standing forest stock





Financial results Q1 2023

**Due to the worsened market outlook actions
are taken to protect margins and manage
costs**

President and CEO Annica Bresky
CFO Seppo Parvi
25 April 2023

THE RENEWABLE MATERIALS COMPANY

Photo: Steeltech Industries PTE Ltd

Our purpose



Do good for
people and the
planet



Replace non-
renewable materials
with **renewable**
products



Delivering on our strategic roadmap during challenging market conditions



Key highlights

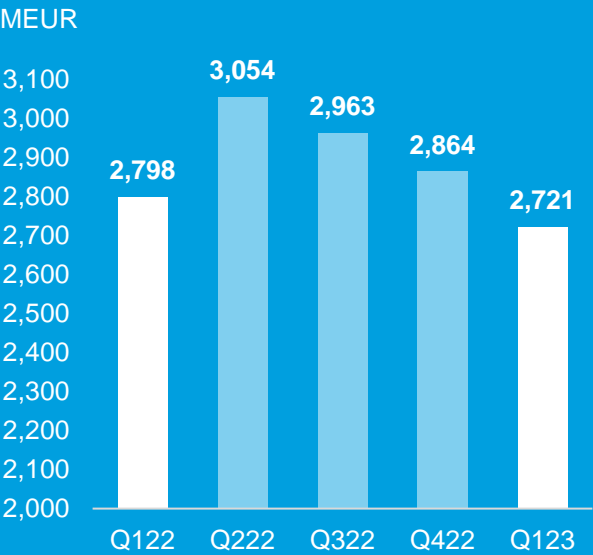
- **Optimisation** of the business portfolio by the discontinuation of the Paper division to focus on the key growth areas
- **Completion** of the strategic acquisition of De Jong to advance growth in renewable packaging and entering new markets
- **Allocation** of capital to the Oulu site to grow in high-end renewable consumer board, creating the lowest cash cost megasite in Europe
- **Continuation** of the divestment process of the Beihai site proceeding to plan



Market-driven slowdown and higher cost levels continued to impact sales and profit

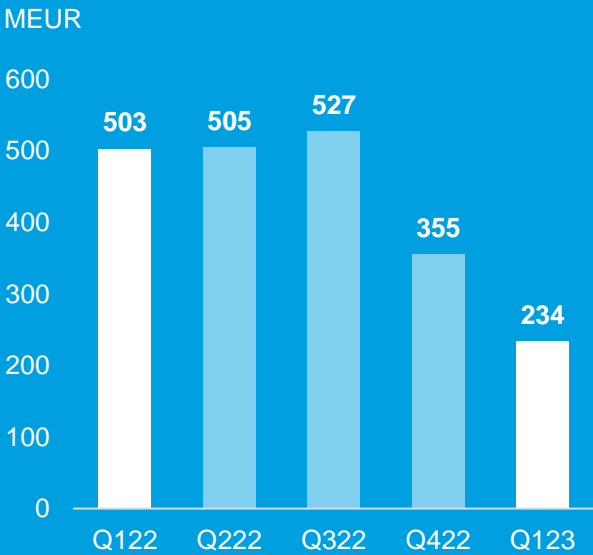


Sales



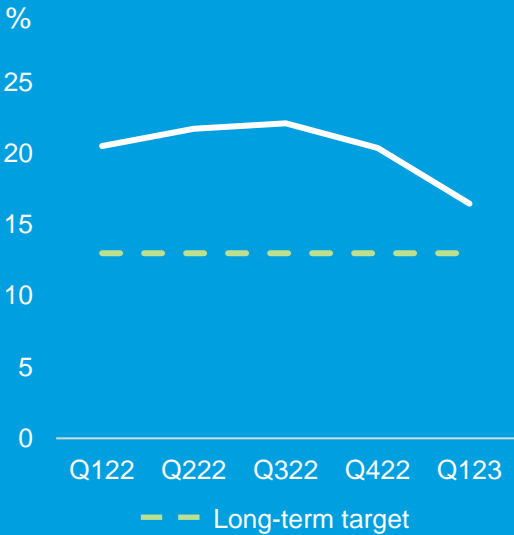
Sales decreased by 3% YoY

Operational EBIT



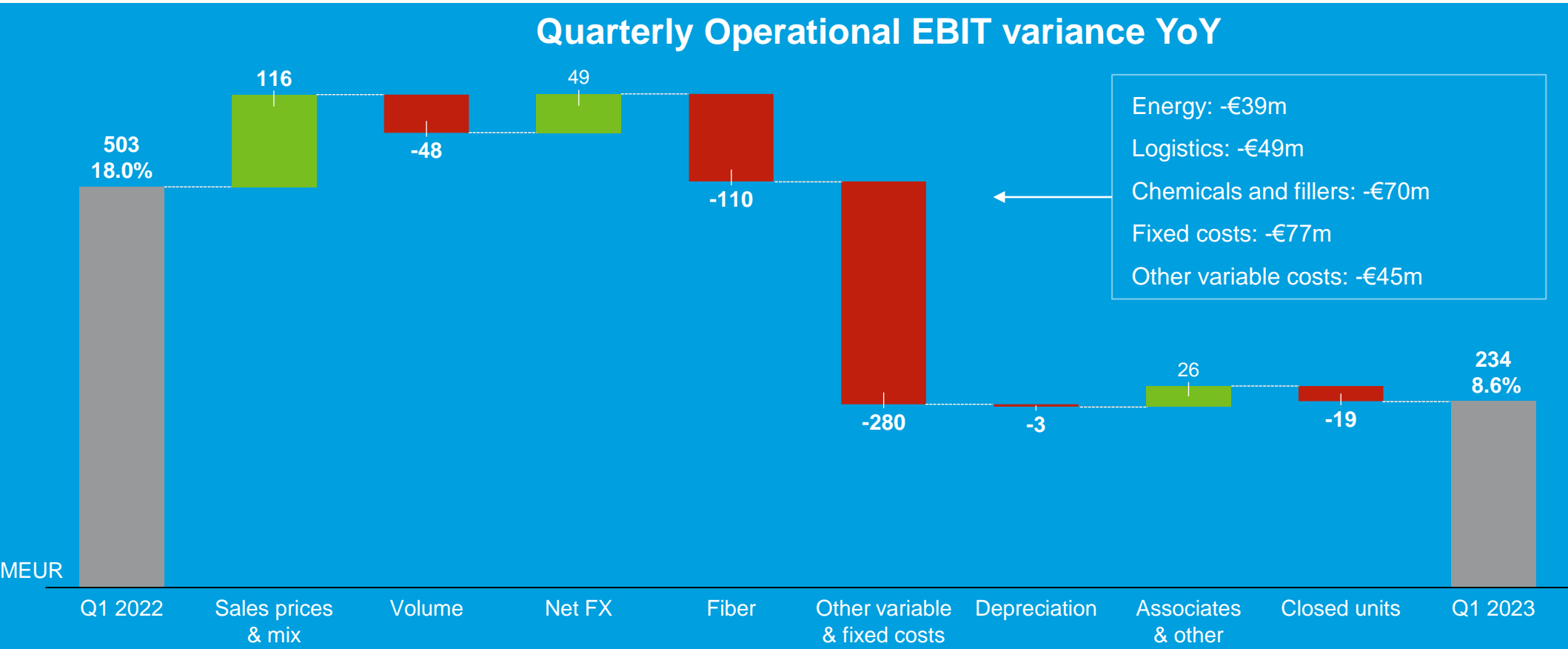
OpEBIT decreased by 53% YoY

LTM Operational ROCE excl. Forest



LTM OpROCE excl. Forest 16.5%, above long-term target of >13%

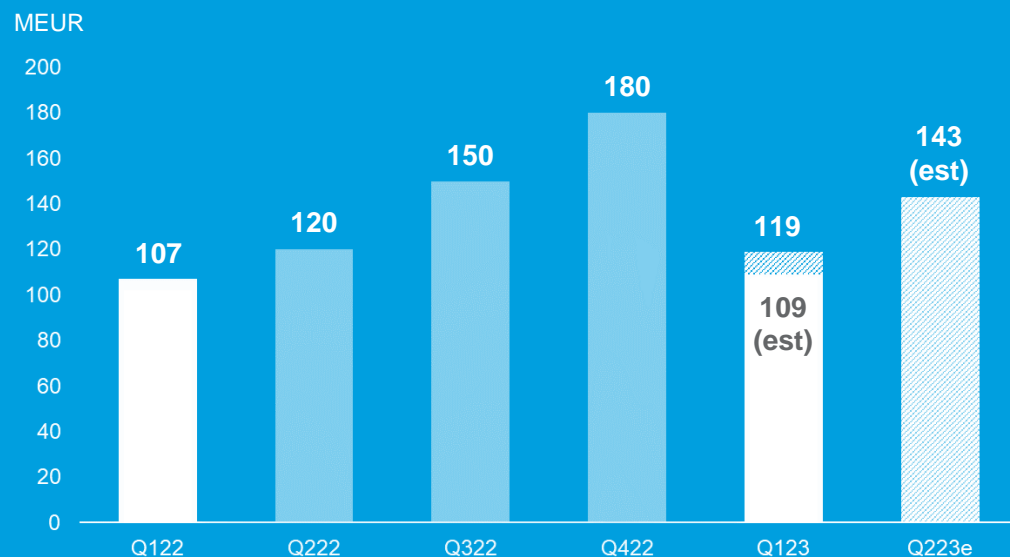
Higher prices did not mitigate the continued increase in variable costs



Maintenance shutdowns impacting quarterly results



Group total maintenance impact on operational EBIT



Major maintenance shutdowns in 2023

Packaging Materials

Q1: -

Q2: Beihai, Ostroleka, Langerbrugge

Q3: Anjala, Heinola, Ostroleka, Oulu, Varkaus, Ingerois

Q4: Fors, Imatra, De Hoop, Skoghall

Biomaterials

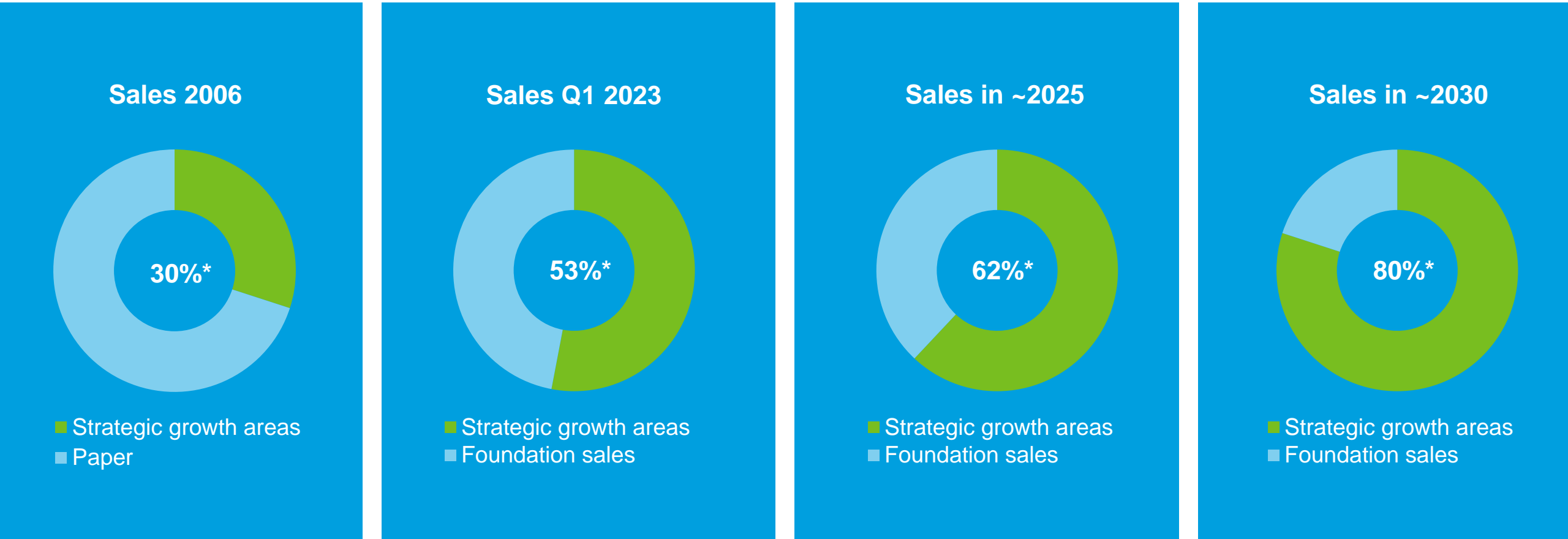
Q1: Veracel

Q2: Montes Del Plata, Skutskär

Q3: Sunila

Q4: Enocell

Strategic growth areas represented 53% of sales Q1/2023



*Strategic growth areas include Packaging Materials, Packaging Solutions, Biomaterials Innovations (part of Biomaterials), Building Solutions (part of Wood Products) and New business (part of Segment Other)
**Foundation businesses include Pulp in Biomaterials, Traditional Wood Products in Wood Products, Forest and Paper

Delivering on strategic initiatives and completing tactical acquisition



Strategic investments and integration

- Completed the De Jong acquisition on 6 January - ongoing integration. The corrugated business is part the Packaging Solutions division and De Hoop containerboard business is part of the Packaging Materials division

Allocation of capital for growth in renewable packaging

- Growth investment at the Oulu site
- Initiated divestment process of the Beihai site

Discontinued the paper division on 1 January 2023

- Finalised divestments of the Nymölla, Maxau and Hylte paper sites
- Discontinued divestment process of the Anjala paper site - the site will be retained in the Group and one of two paper machines planned to be closed down



Partnering to develop and advance innovations



New co-operations to enhance development of lignin-based products and bio-based polyesters

- Bio-based plywood, collaboration with Polish plywood manufacturer Paged – using high-purity kraft lignin
- Stora Enso and Finnish company Valmet are collaborating on next-generation lignin product and process development
- Joint Development Agreement with Korean company Kolon to develop and industrialise bio-based polyesters as an alternative to fossil-based plastics



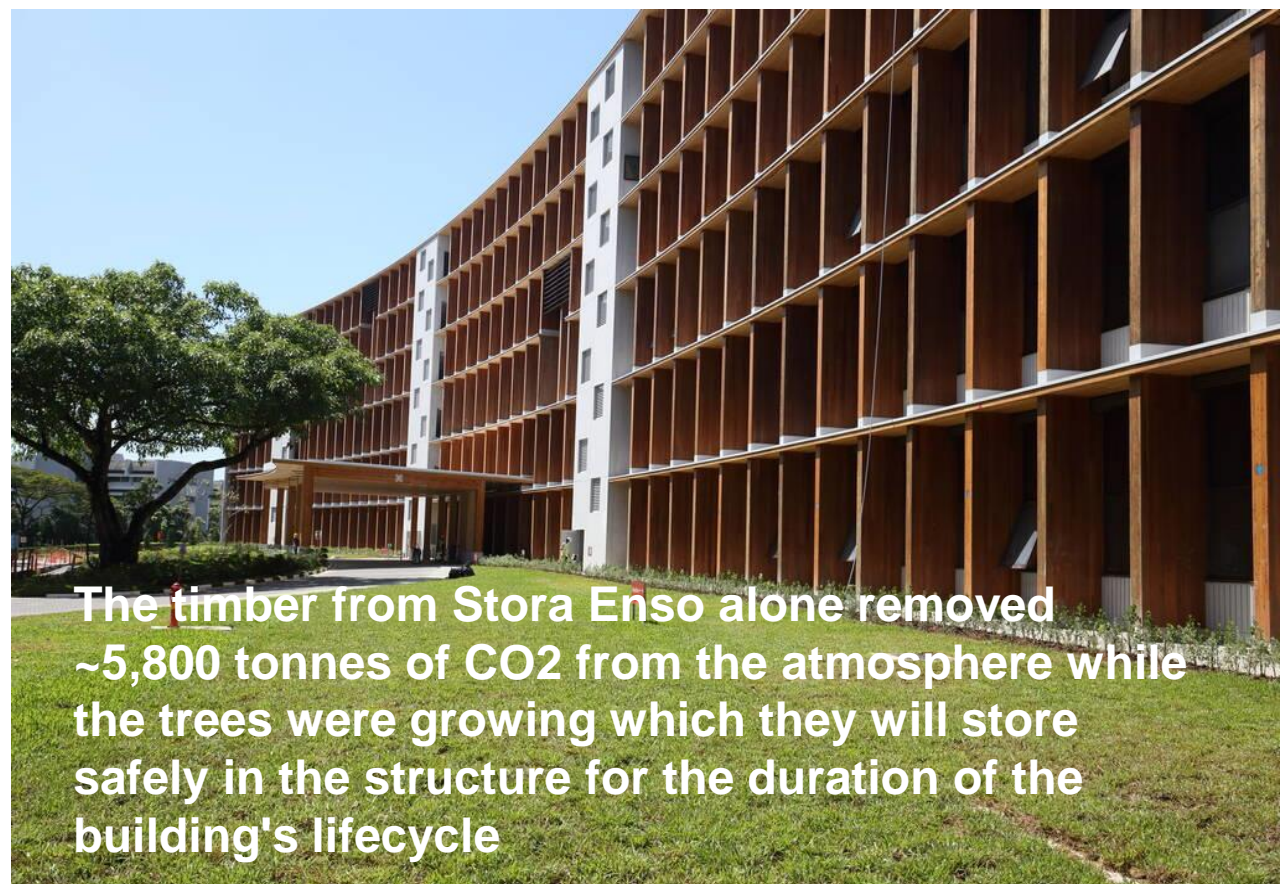
Building a sustainable renewable future with wood



The timber structures of this spectacular building store ~5,900 tonnes of CO₂, equivalent to driving 1,260 times around the world by car

Photo: Pasi Salminen/Stora Enso

Stora Enso HQ - Building owner: Finnish pension insurance company Varma



The timber from Stora Enso alone removed ~5,800 tonnes of CO₂ from the atmosphere while the trees were growing which they will store safely in the structure for the duration of the building's lifecycle

Photo: Steeltech Industries PTE Ltd

University Building in Nanyang, Singapore

Financials

Long-term Group level financial targets

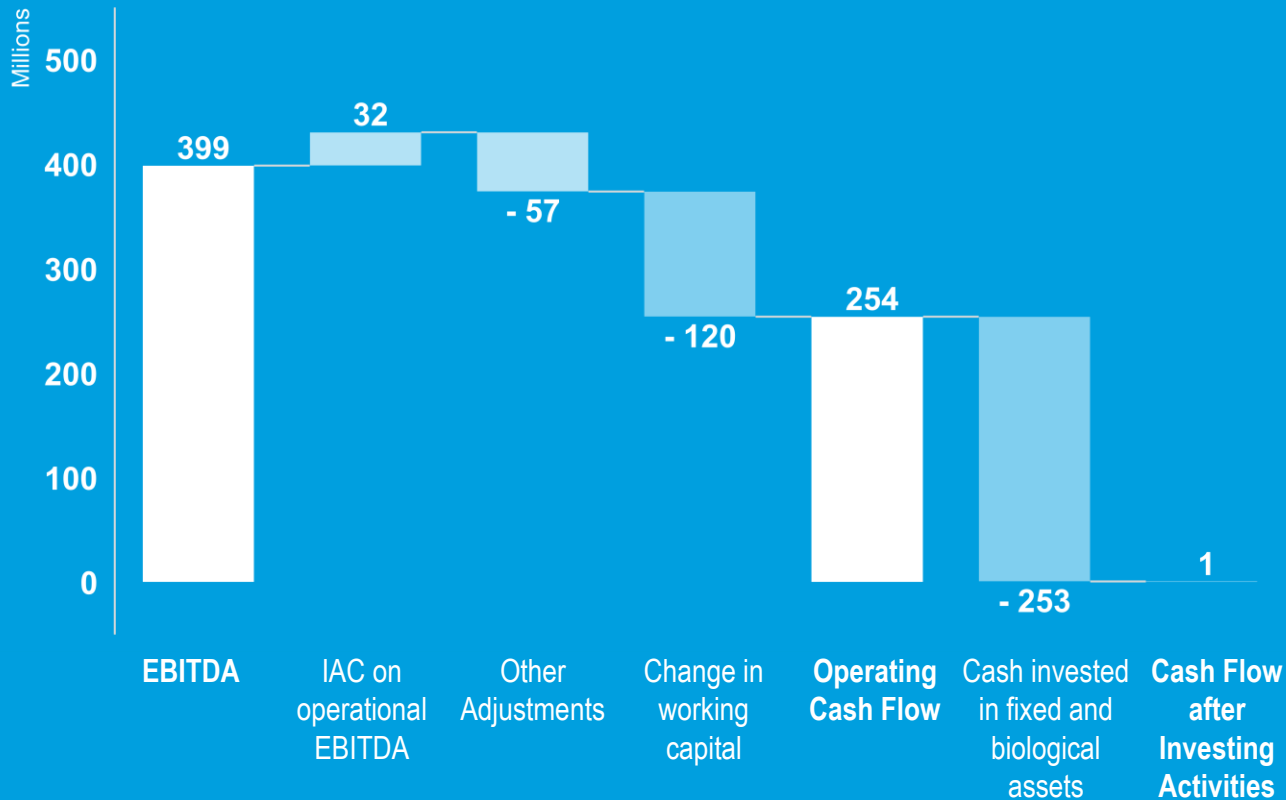
Growth impacted by lower deliveries and structural changes



Group long-term financial targets		Q1 22	Q1 23		2022	
Dividend (annual)	To distribute 50% of EPS excluding fair valuation over the cycle	N/A	N/A		0.60	●
Growth YoY	> 5%	23%	-3%	●	17%	●
Net debt to operational EBITDA	< 2.0x	1.1	1.3	●	0.7	●
Net debt to equity	< 60%	24%	25%	●	15%	●
LTM Operational ROCE excl. Forest	> 13%	20.5%	16.5%	●	20.4%	●

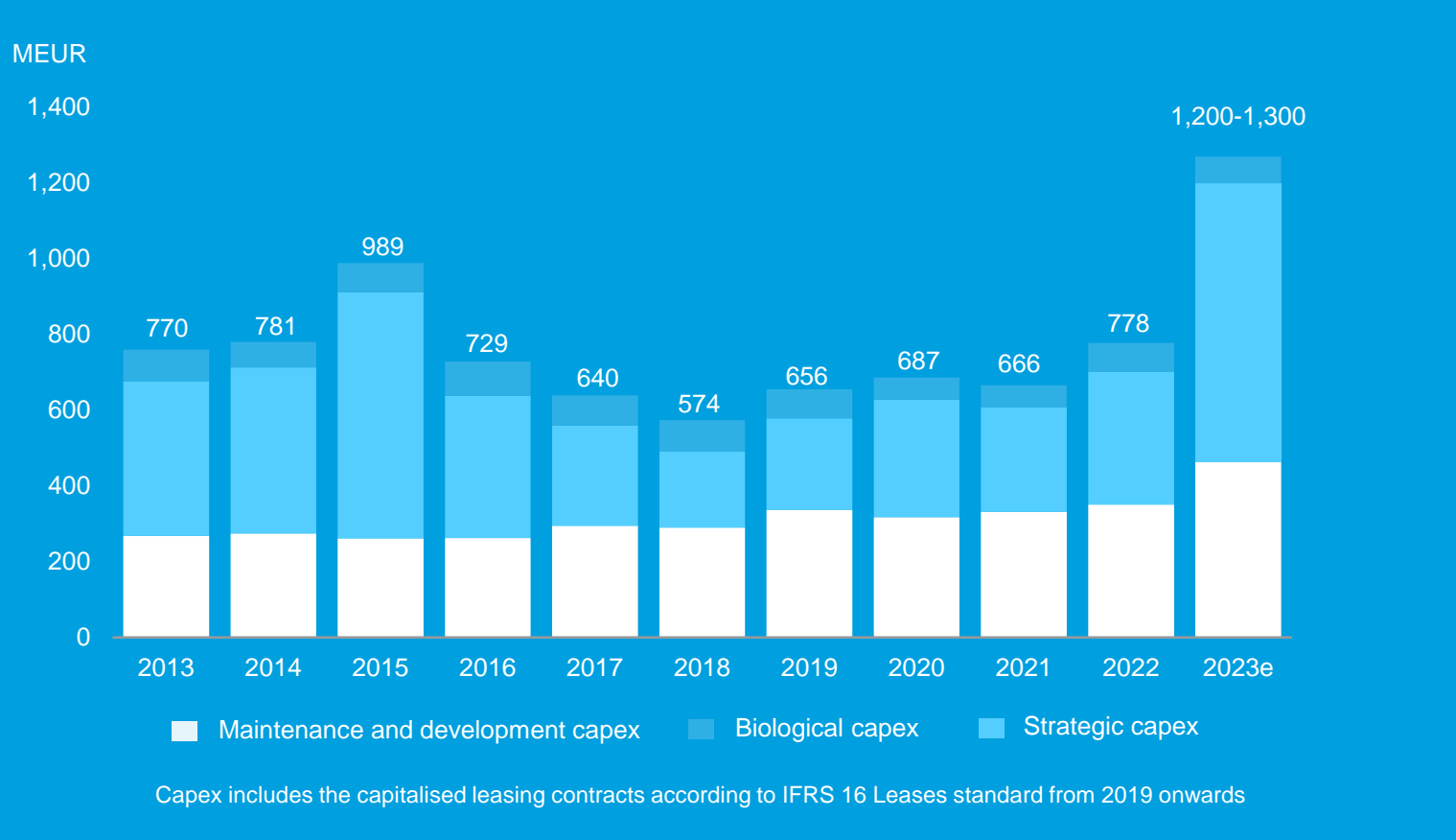
Divisional long-term financial targets		Q1 22	Q1 23		2022	
Packaging Materials	LTM Operational ROOC > 20%	18.4%	13.5%	●	18.6%	●
Packaging Solutions	LTM Operational ROOC > 15%	18.6%	5.2%	●	7.9%	●
Biomaterials	LTM Operational ROOC > 15%	22.2%	24.0%	●	25.3%	●
Wood Products	LTM Operational ROOC > 20%	65.8%	24.9%	●	43.2%	●
Forest	LTM Operational ROCE > 3.5%	3.7%	3.8%	●	3.7%	●

Cash flow impacted by working capital development and high capex - focus on improving cash flow



- Cash flow after investing activities was EUR 1 (202) million
- Working capital increased by EUR 120 million, mainly due to increased inventories, and was offset by lower trade receivables and increased payables
- Cash spent on capex was EUR 253 million, of which the majority related to strategic investments
- Focus on turning around the working capital trend and restricted capital allocation to improve cash flow
- We will postpone major strategic initiatives until further notice including a decision on a conversion at the Langerbrugge site. We are also assessing the investment in Lignode

Higher capex estimate mainly due to growth investments in consumer board



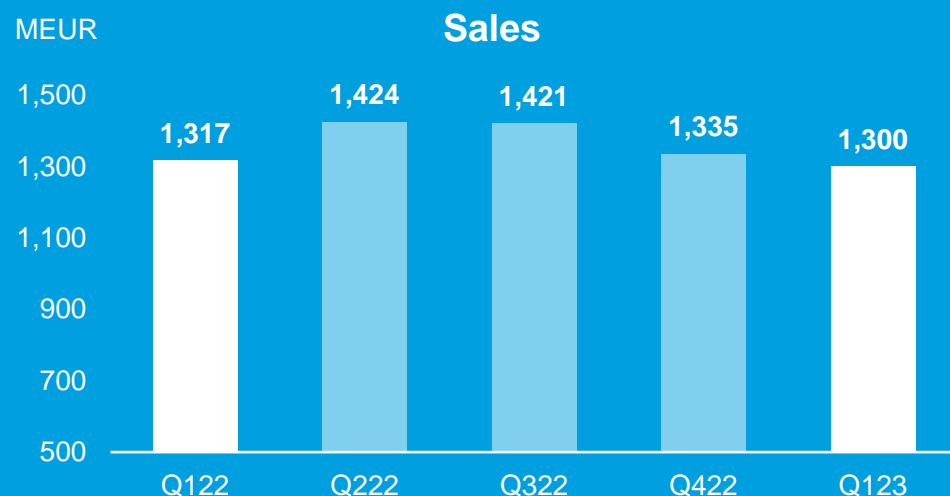
Average capex split for 2013–2023
Depending on investment decisions



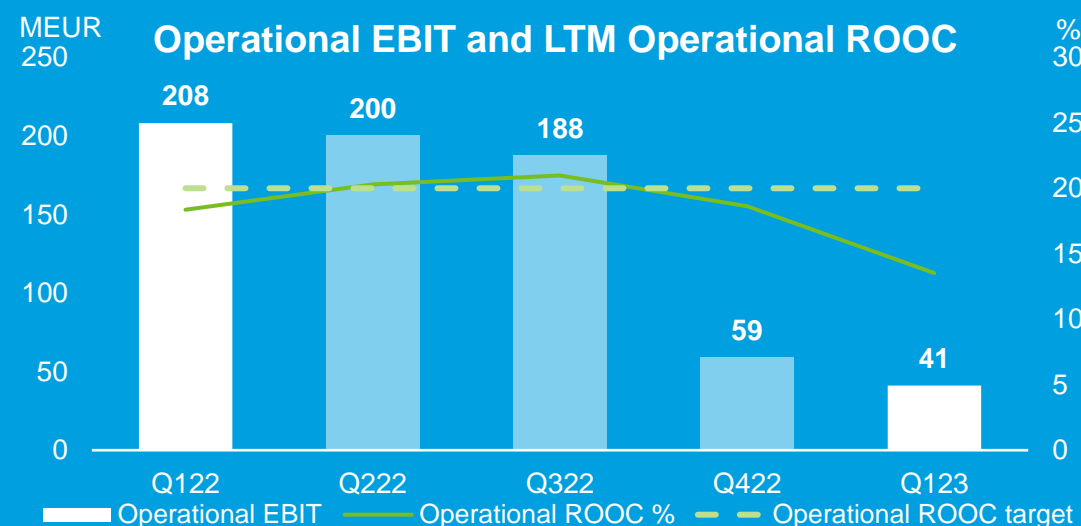
Divisional overview

Packaging Materials

High operating costs continued in the quarter, with weakening market demand outside Liquid Packaging Board



- Sales -1% YoY
- Price and volume decline was only partly offset by the contribution from the De Hoop recycled containerboard site and higher Consumer Board and Paper prices
- Weakening demand of cartonboard towards the end of the quarter

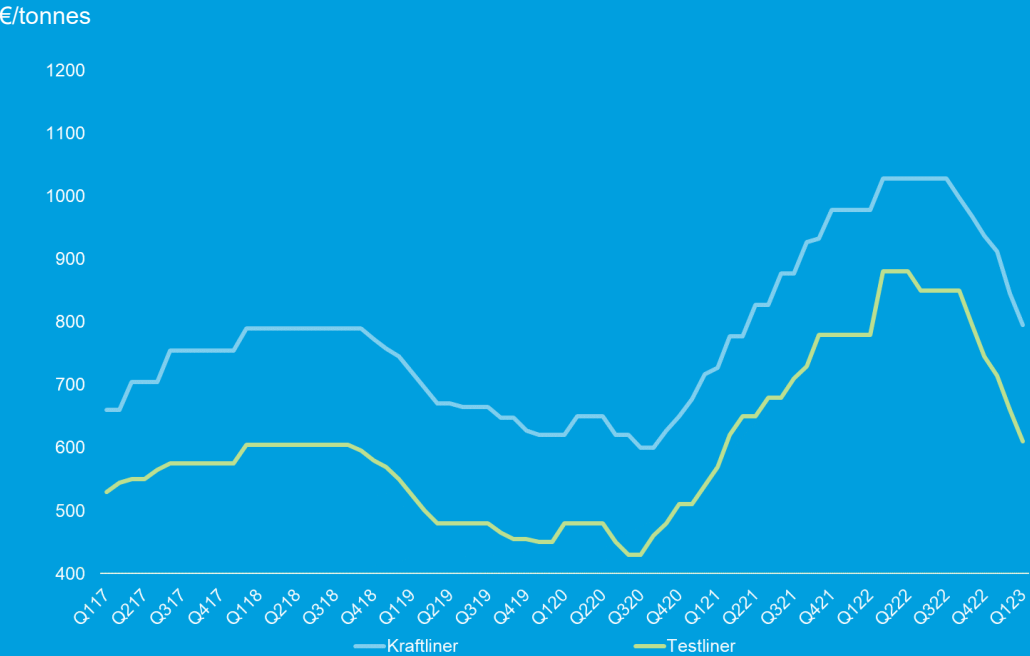


- OpEBIT -€167m YoY
- Increased operating costs, lower containerboard volumes and prices and impact from the logistics strikes in Finland were only partly offset by higher consumer board and paper prices
- LTM OpROOC at 13.5%, long-term target >20%

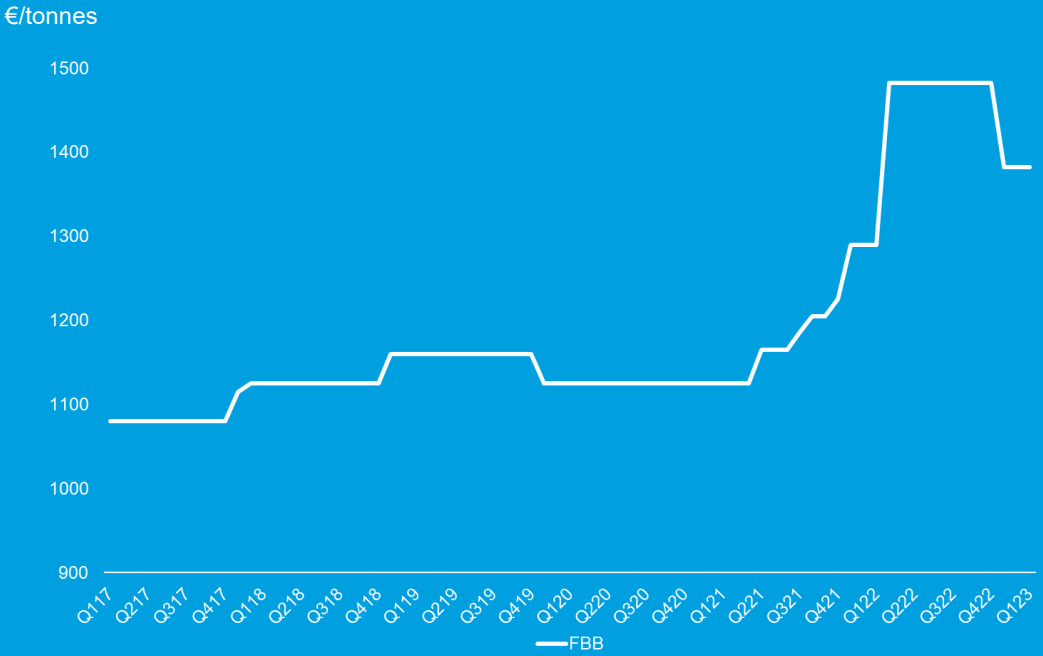
Falling containerboard prices due to weaker demand and high inventories - weakening Folding Box Board prices



Containerboard prices

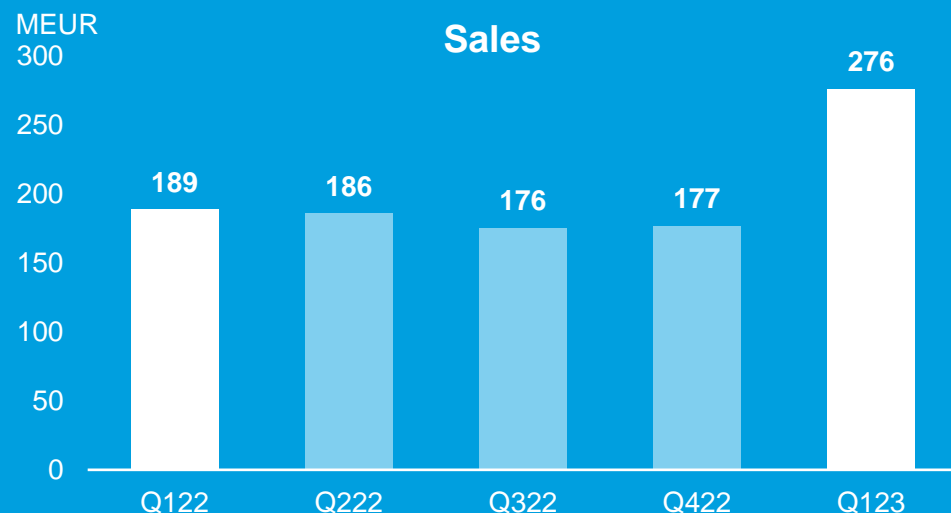


Folding boxboard prices

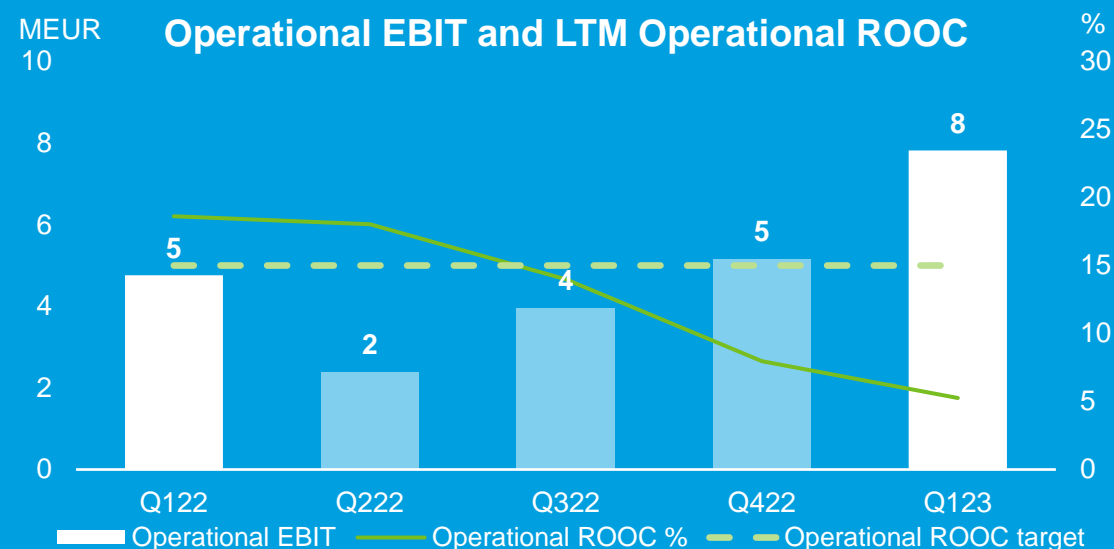


Packaging Solutions

Strengthened results despite challenging overall market demand



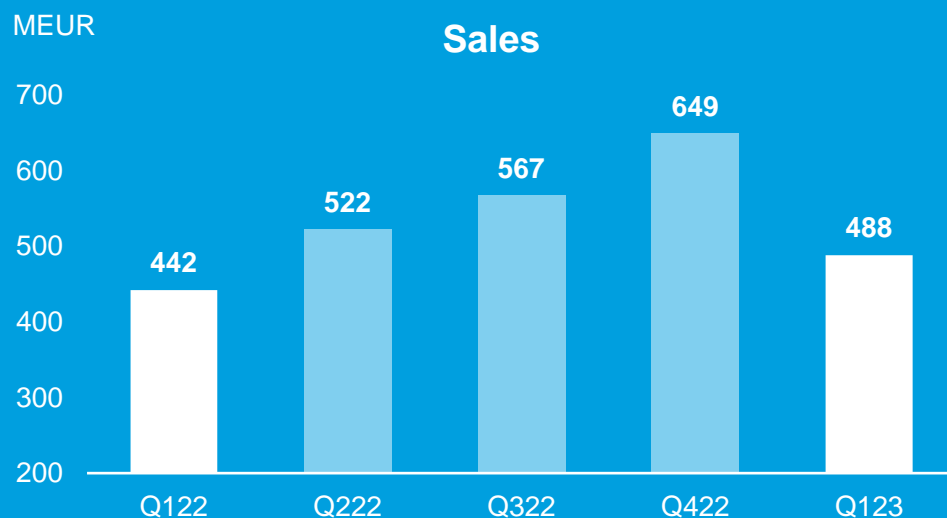
- Sales +46% YoY
- The acquisition of De Jong more than offset the impact from the divestment of the Russian operations in Q2/2022
- Sales from the Northern and Central-Eastern European businesses decreased slightly due to the soft market, and lower sales prices



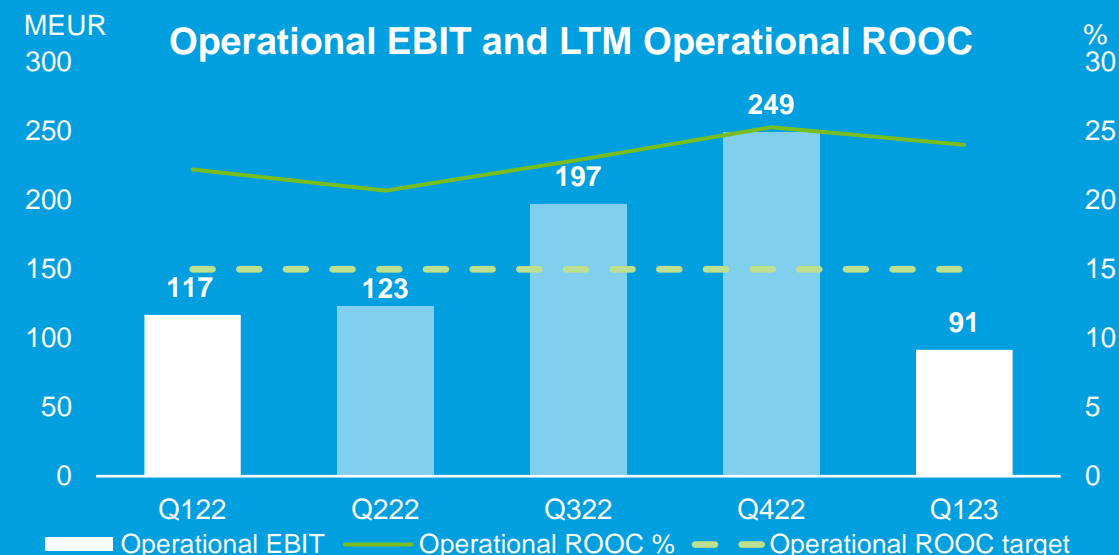
- OpEBIT +€3m YoY
- The acquisition of De Jong and contribution from Northern and Central-Eastern Europe improved performance, mitigating negative impact from the soft market and the divestment of the Russian operations in Q2/2022
- LTM OpROOC at 5.2%, long-term target >15%

Biomaterials

All-time high first quarterly sales did not offset cost escalation as the pulp market turned softer during the quarter

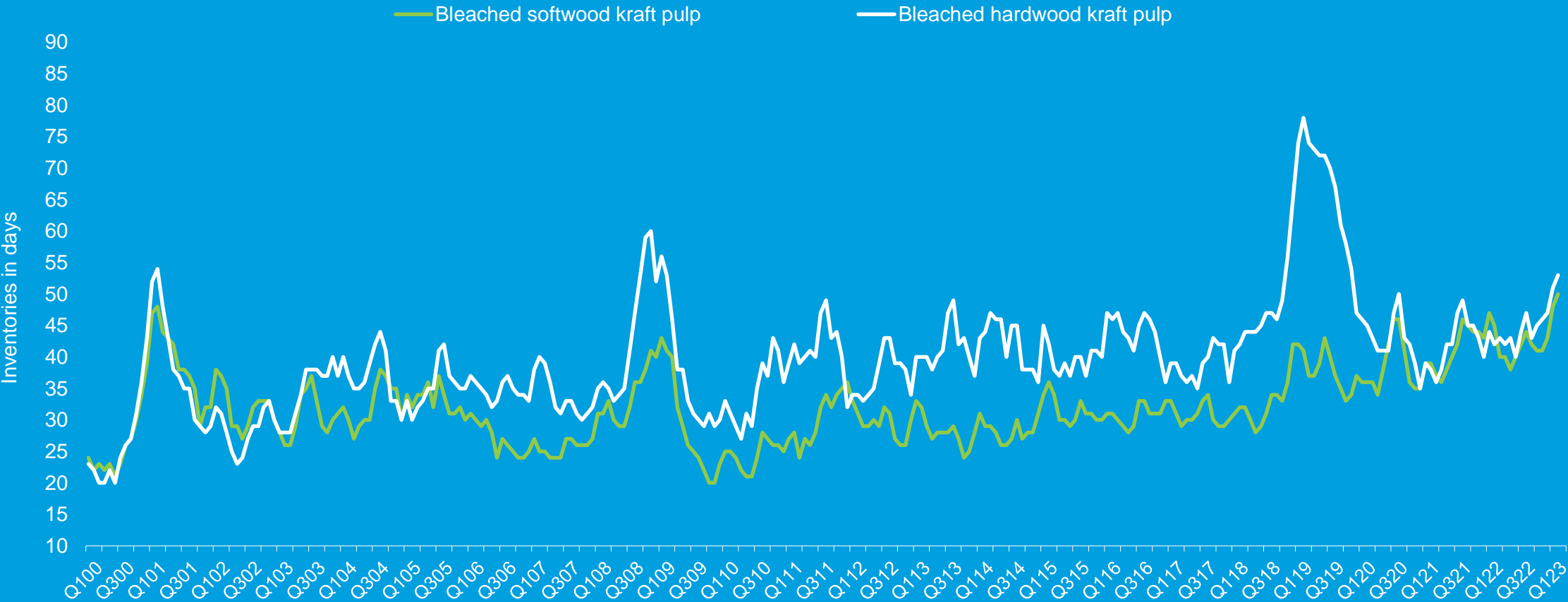


- Sales +10% YoY, first quarter all-time high
- Sales were driven by stronger year-on-year prices, solid by-product sales support and favourable currency exchange rates
- Increasing global market pulp inventories due to low demand, and weaker than expected the Chinese market

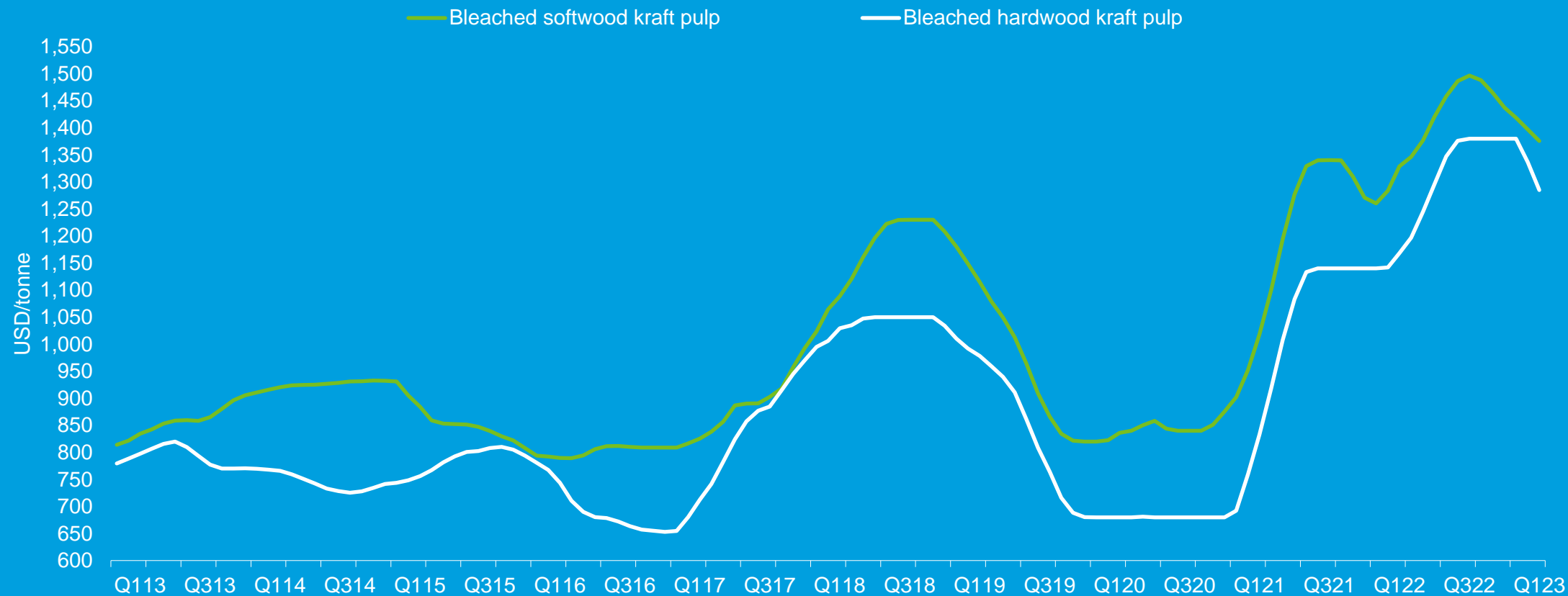


- OpEBIT -22% YoY
- Higher sales did not offset higher higher wood, chemicals and fixed costs
- The Veracel site in Brazil had a planned major annual maintenance shutdown which significantly impacted the result
- LTM OpROOC at 24%, long-term target >15%

Global pulp inventories

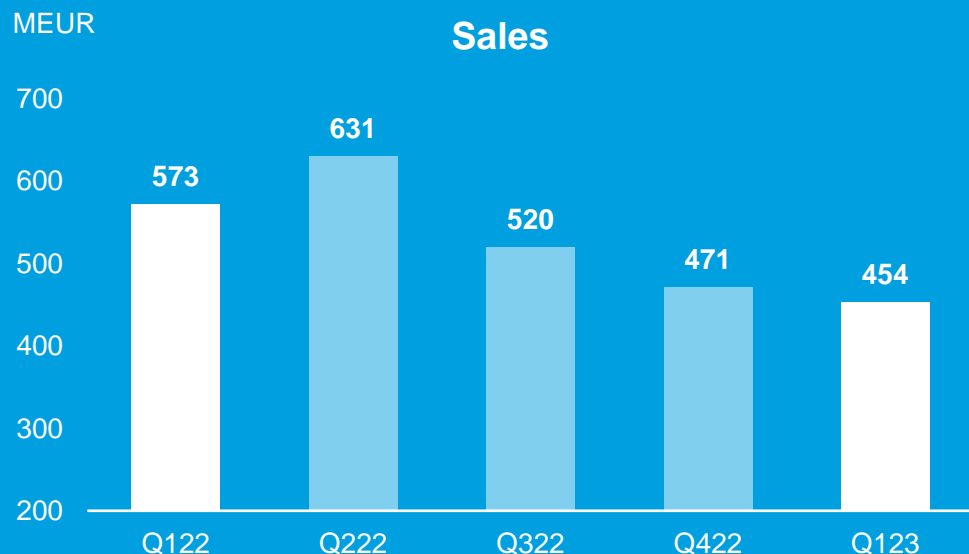


Global market pulp prices

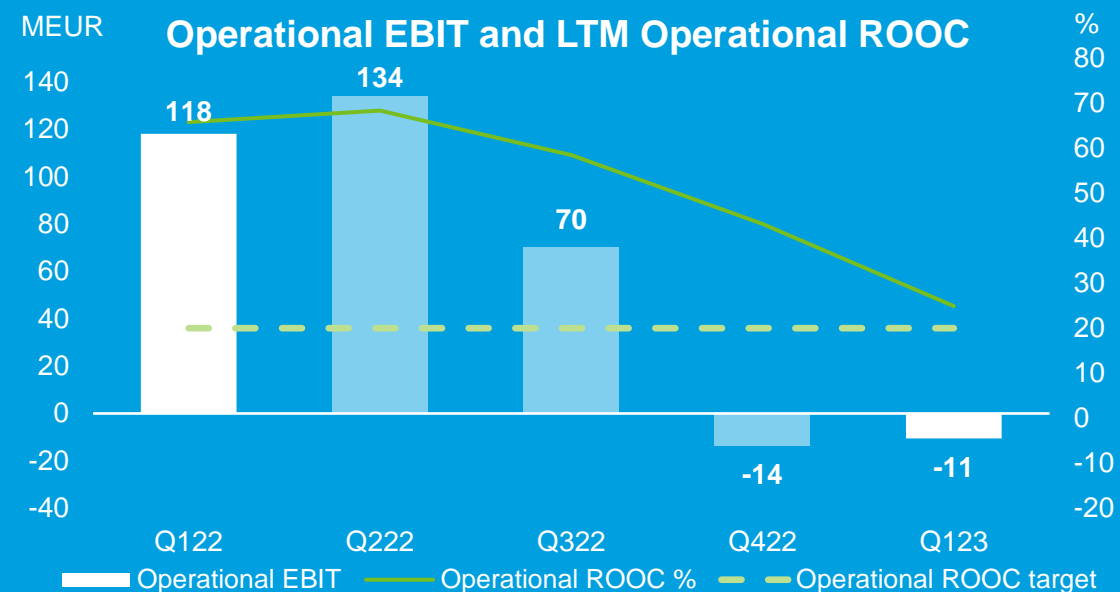


Wood Products

Sales and profit were impacted by a significantly weaker sawn wood market and the exit from the Russian operations



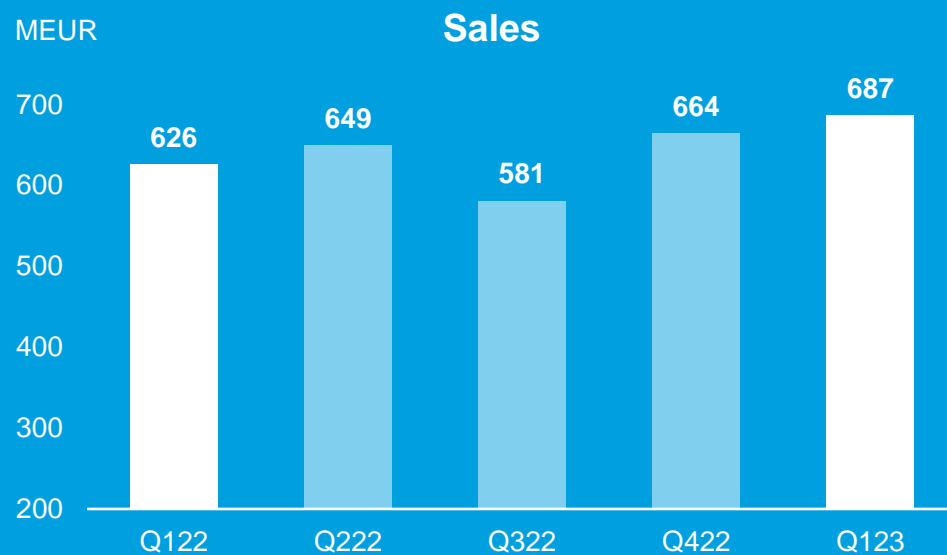
- Sales -21% YoY
- The construction market was impacted by market slowdown with fewer building permits and projects
- Lower sales mainly impacted by lower volumes and sales prices, especially for sawn wood, and the exit from the Russian operations in Q2/2022



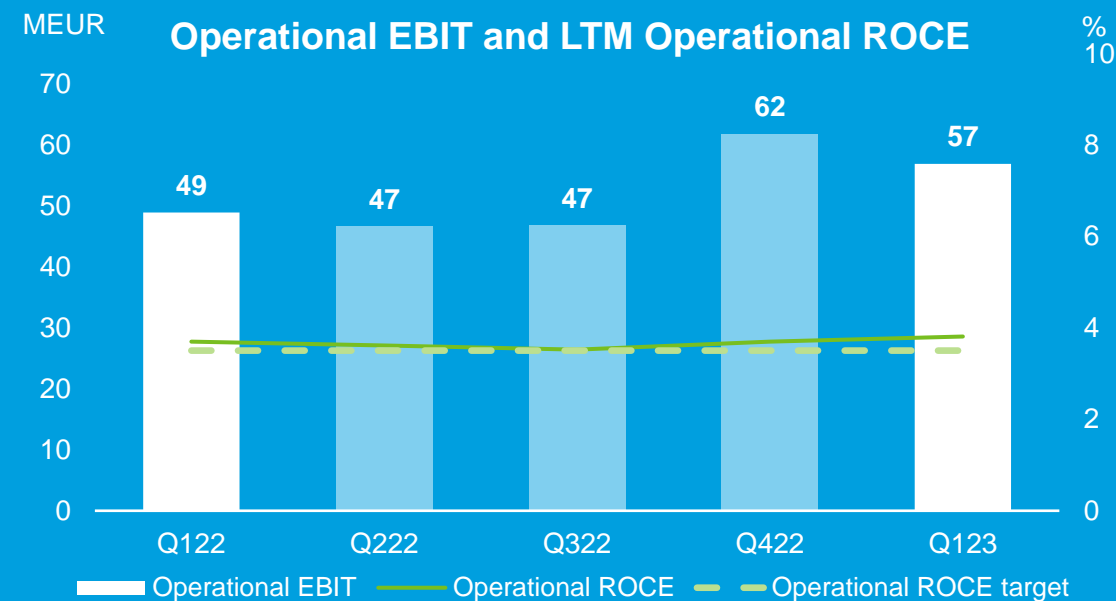
- OpEBIT -€129m YoY
- Lower prices and volumes, together with increased costs mainly for logistics and electricity
- LTM OpROOC at 24.9%, long-term target >20%

Forest

Strong and stable financial result continued

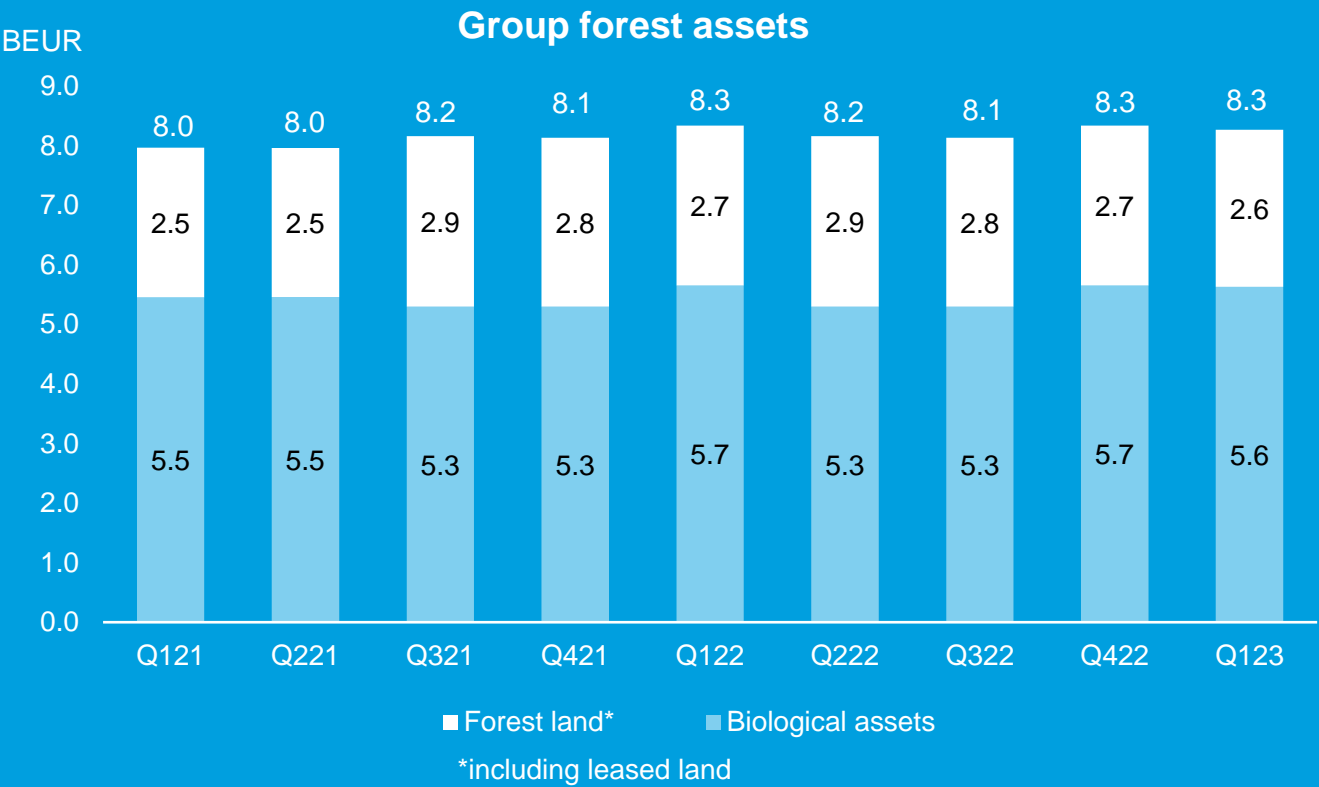


- Sales +10% YoY
- Sales was driven by higher wood prices year-on-year, especially in pulpwood, whereas the wood demand was lower year-on-year



- OpEBIT +16% YoY
- Results were driven by stable and strong operational performance in the Group's own forest assets and in the wood supply operations
- LTM OpROCE at 3.8%, long-term target >3.5%

Stable forest assets fair value development provides strong resilience to inflation



- Fair value of €8.3 billion equivalent to €10.49 per share
- Slight adverse FX impact, mainly in SEK
- Market transaction-based forest property prices updated in Finland and Sweden in connection with Q2 and Q4 reporting

Outlook & Market development

Outlook and guidance

Lowered annual guidance due to worsening outlook: the FY2023 operational EBIT is expected to be significantly lower than for the FY2022 (€1,891m)



- Cost pressures and market uncertainties are expected to be significantly more challenging in 2023 than in 2022 weighing on our result and lowering the short-term visibility this year
- Group margins are expected to be adversely impacted by increasing costs, particularly in relation to energy, wood, and chemicals
- Demand in the whole packaging market is weakening, especially containerboard, Wood Products are impacted by the continued slowdown in the construction sector, and a weaker pulp market with tight availability of pulpwood is expected to weigh on the Biomaterials division
- Pricing, flexibility in product mix, inventory, capacity adjustments, sourcing and logistics and reinforced cost control are in place
- Restrictive capital expenditure and working capital management to safeguard cash flow and to secure a solid balance sheet are in place
- Operationally, the focus on decentralisation continues in combination with a reduction of overhead costs, focus on cash flow and lowering capex

Group Operational EBIT

Guidance range full year	%
Significantly higher	+50 % and above
Higher	More than +15%, but less than +50%
In line with	+/- 15 %
Lower	More than -15%, but less than -50%
Significantly lower	- 50 % and below

Market demand outlook for Q2 2023 compared to Q1 2023



Packaging Materials

Demand for consumer board is expected to remain stable
Demand for containerboard is expected to remain weak

Packaging Solutions

Demand for corrugated packaging is expected to slightly improve due to seasonality

Biomaterials

Pulp demand is expected to be lower in Europe and China

Wood Products

Limited seasonal demand improvement for sawn wood expected

Forest

Sawlogs demand is expected to remain stable, while pulpwood demand is expected to decline



Key takeaways



Financial performance

- Weak Q1 results caused by external factors such as weakening demand and continued high cost inflation
- Managing market volatility with flexibility and sourcing measures, combined with reinforced cost control and lowering capex

Strategic initiatives

- Optimising the business portfolio to focus on long-term value creation by growing in renewable packaging, sustainable building solutions and biomaterials innovations
- Positioning for long-term growth by combining financial performance with lowered environmental impact to serve all business sectors





THE RENEWABLE MATERIALS COMPANY