

Disclaimer



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Stora Enso in brief



Part of the global bioeconomy, leading provider of renewable products in packaging, biomaterials, wooden constructions and paper, and one of the largest private forest owners in the words

YOGURT

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

Sales €10.2 billion in 2021



Operational EBIT €1,528 million in 2021



~22,000 employees



We are shaping our business for higher growth and value



Growth



Packaging



Building Solutions



Biomaterials Innovations

Foundation

Forest



Pulp

Traditional wood products



Paper

Sustainability is the opportunity driving our growth strategy

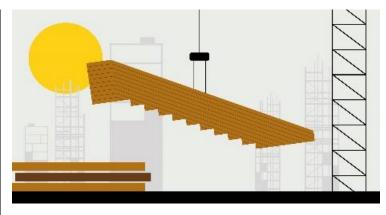




Packaging

- High demand for plastic free and ecofriendly circular packaging
- Attractive investment options available
- Organic and M&A driven growth





Building Solutions

- 10%+ annual market growth
- Potential to capture a larger share of the value chain
- Organic and M&A driven growth

3x sales from Building Solutions with ~20% EBIT margin



Biomaterials Innovations

- · High growth end product markets
- Proprietary technologies and unique value propositions
- Growth from new business

35%+ margin in novel markets with strong growth

Development of long-term financial targets



Group long-term financia	l targets	Q4 20	Q4 21	2020	2021	
Dividend*	To distribute 50% of EPS excluding fair valuation over the cycle	-	-	0.30	0.55**	
Growth*** YoY	> 5%	-2.5%	39.0%	-8.7%	28.7%	
Net debt to operational EBITDA	< 2.0x	2.3	1.1	2.3	1.1	
Net debt to equity	< 60%	33%	22%	33%	22%	
Operational ROCE excl. Forest	> 13%	4.7%	20.4%	7.0%	17.8%	

Divisional long-term financial targets		Q4 20	Q4 21	2020	2021	
Packaging Materials	Operational ROOC > 20%	9.2%	16.8%	13.9%	18.0%	
Packaging Solutions	Operational ROOC > 25%	16.0%	19.4%	13.9%	10.8%	
Biomaterials	Operational ROOC > 15%	-2.4%	27.1%	0.4%	20.8%	
Wood Products	Operational ROOC > 20%	23.5%	53.1%	19.1%	59.4%	
Forest	Operational ROCE > 3.5%	3.7%	3.6%	3.8%	5.1%	
Paper	Cash flow after investing activities to sales > 7%	11.1%	-2.9%	1.8%	-4.5%	

^{*} Annual dividend. ** Dividend proposal *** Excluding Paper

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Capacities by grade



Grade	Capacity 1,000 t
Consumer Board	3,380
Containerboards*	1,915
Corrugated Packaging	1,385 (Mm ²)
Sawn goods	5.7 Mm3
Short-fiber pulp	1,400
Long-fiber pulp	450
Fluff pulp	350
Unbleached kraft pulp	150
Net market pulp	2,350

Grade	Capacity 1,000 t
Newsprint and Book paper	1,390
Uncoated magazine (SC) paper	685
Uncoated fine paper	485
Paper Total	2,560

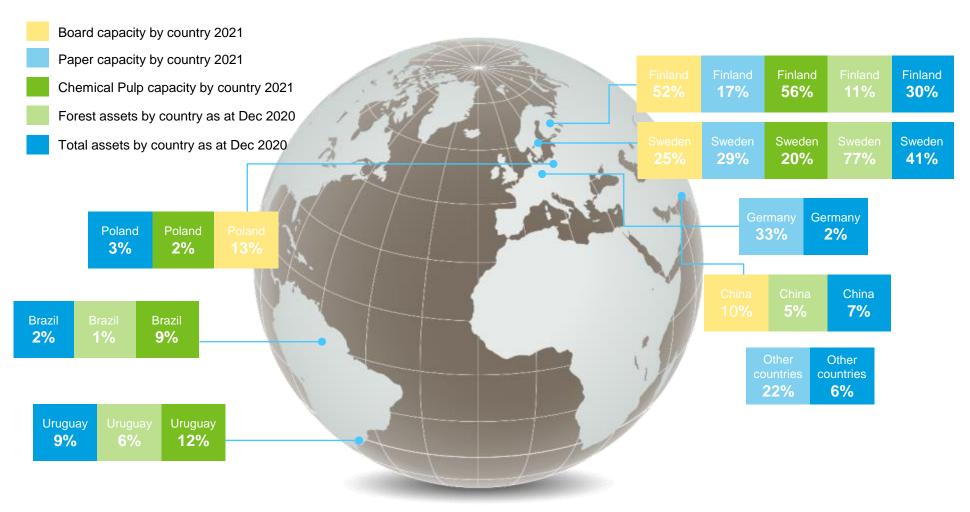
Usage of Paper for Recycling (PfR)	1,000 t
PfR for Paper mills	1,000
OCC** for Containerboard mills	766
Total	1,766

^{*}Capacity includes 130,000 tonnes of sack and wrapping paper capacity from Ostroleka **Old Corrugated Cartons

Global position

- capacity and biological asset allocation





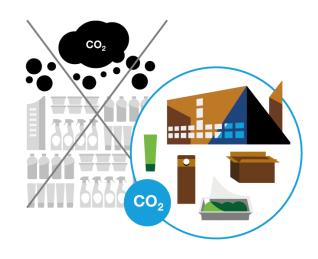
Stora Enso's annual estimated climate impact













Our forests remove carbon¹

-1.5

million tonnes of CO₂

Our products store carbon

-2.6

million tonnes of CO₂e

Our value chain emissions²

+10.5

million tonnes of CO₂e

Our products substitute fossil-based products, saving

-17.9

million tonnes of CO₂e

Climate impact³

_ 11.5

million tonnes of CO₂e

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¹⁾ Estimated net annual carbon sequestration in own and managed forests and plantations, which provide about 30% of our wood use. Excludes purchased wood. Third-party owned forests that provide Stora Enso's purchased wood are estimated to have an additional net carbon sequestration of –5 million tonnes of CO2 annually.

²⁾ Fossil CO2 emissions in 2019 including direct emissions from our operations, emissions from purchased energy as well as emissions from other sources along our value chain (Scope 1, 2, and 3). Calculated based on the guidance provided by the Greenhouse Gas Protocol.

³⁾ Negative value indicates a net removal from atmosphere. Calculated by the Swedish University of Agricultural Sciences (SLU) in 2020 based on Stora Enso's production, forest and wood use, and emission figures in 2019: Climate effects of a forestry company – including biogenic carbon fluxes and substitution effects.



Stora Enso sets ambitious goal to offer 100% regenerative solutions by 2050



- Stora Enso fully supports the European Commission's climate goals - EU's Green Deal is an opportunity to transition to a lowcarbon society
- Sustainably managed forests and renewable, circular products are part of the solution in reaching the EU's ambitious climate goals
- We develop regenerative, renewable and circular solutions which contribute positively to climate change and restore negative impacts on the environment
- Our renewable products can help our customers to become:
 - 100% circular
 - biodiversity net positive
 - carbon net positive

Sustainable development goals - the roadmap to 2030 guides our actions



CO₂ Upgraded Science Based Target

- Aligned with a 1.5-degrees scenario
 - Scope 1, 2 & 3: 50% absolute reductions (2019 baseline)



Circular

Products and value chains

- Circular Design Guidelines by 2025
- 100% of our products recyclable by 2030



Biodiversity

Expanding scope and actions

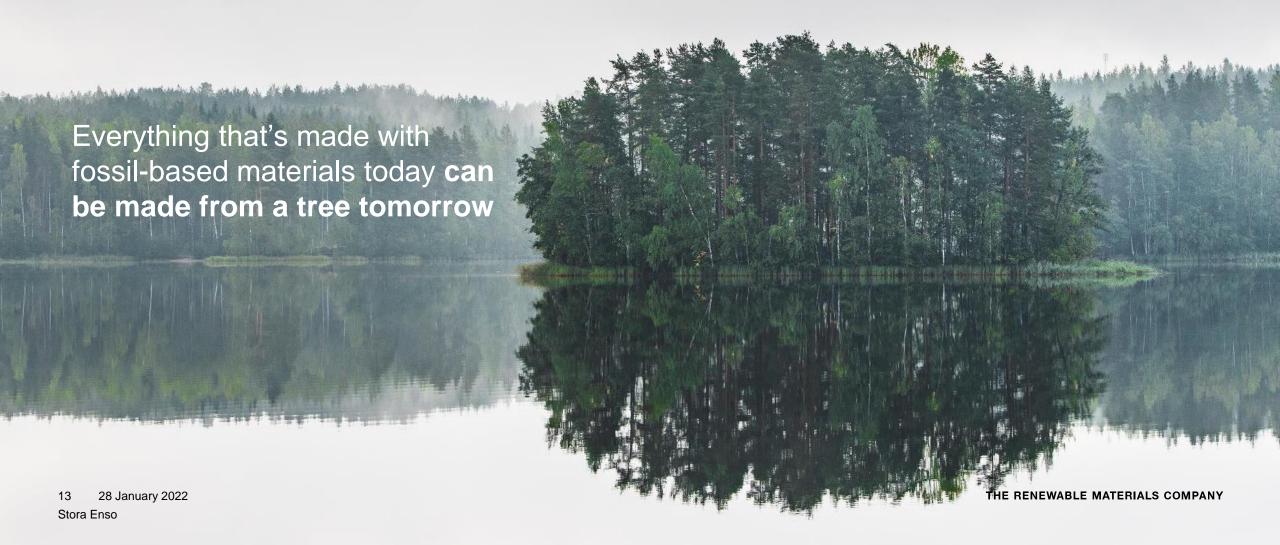
- Detailed action plan towards 2030
- Active biodiversity management with 15 indicators



THE RENEWABLE MATERIALS COMPANY

We are a solution for consumers' new demands

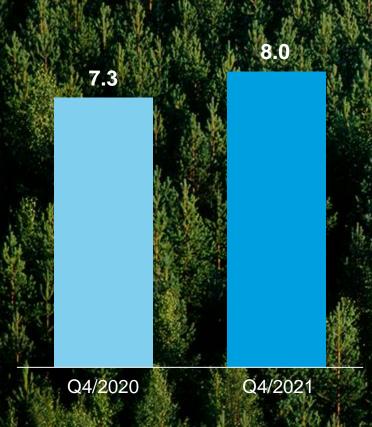




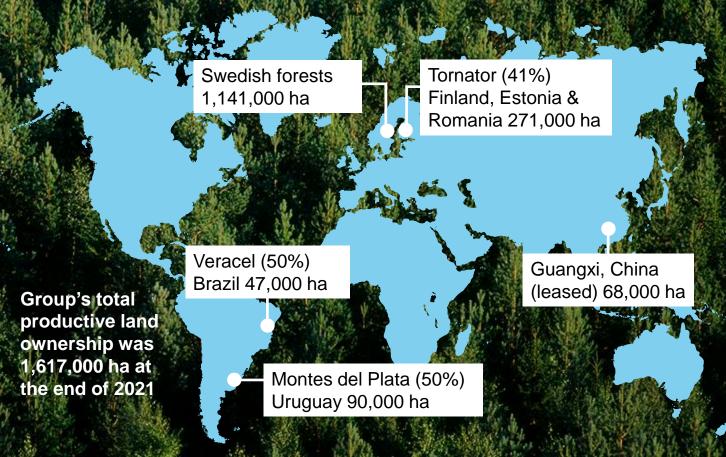
Group forest assets fair value increased to €8 billion or €10.10 per share in 2021







Stora Enso productive forest land areas at end of 2021



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Stora Enso

Stora Enso's global forest assets fair values by region



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

Group forest assets Biological assets: €5.5 billion Forest land*: €2.5 billion

99% certified wood from own forests

Sweden €6.0 billion

(Market transactionbased fair value) (Q4/21)

Tornator (41%) €985m (DCF) (Q4/21)

Montes del **Plata (50%)** €468m (DCF) (Q4/21)

Veracel (50%) €110m (DCF) (Q4/21)

Guangxi €387m (DCF) (Q4/21)

*including leased land

Taking action to grow in sustainable packaging

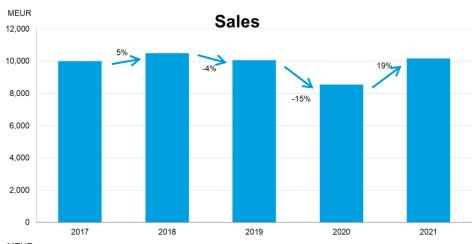


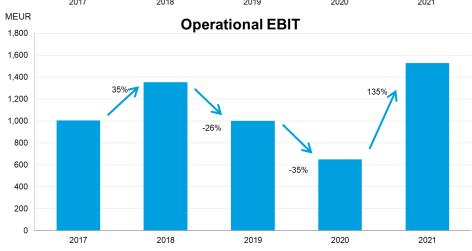


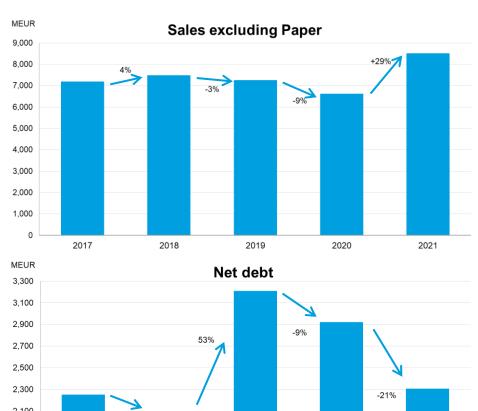
- Skoghall site in Sweden is a key strategic asset that is highly competitive and a quality leader
- The €97m investment at Skoghall will accelerate our growth in strategic packaging
- Building on our global leading position in liquid packaging board and coated unbleached kraft
- Debottlenecking of existing production line completes in H2 2023, annual board grades production of 100,000 tonnes
- Ongoing pre-feasibility study in Oulu, Finland to start for conversion of the 2nd idle line to drive market share in packaging board grades

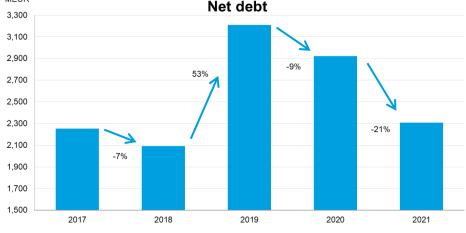
Stora Enso Group 2017-2021





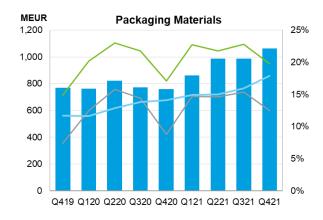




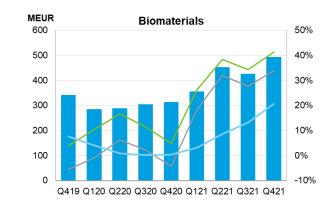


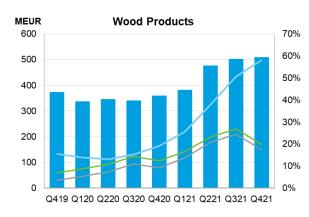
Financial performance - divisions

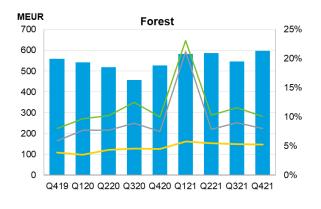


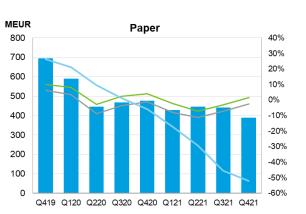


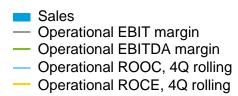














Divisions

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Packaging Materials division in brief





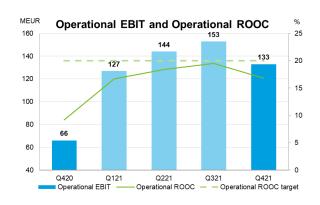
- Strong offering of renewable and recyclable materials with low carbon footprint for consumer and industrial packaging
- Serving demanding packaging end uses with premium materials based on both virgin and recycled fiber
- Customers are converters, brand owners and retailers
- We are targeting expansion of relative market share in profitable niches in consumer board business and growth on the fluting and kraftliner market

Packaging Materials key figures





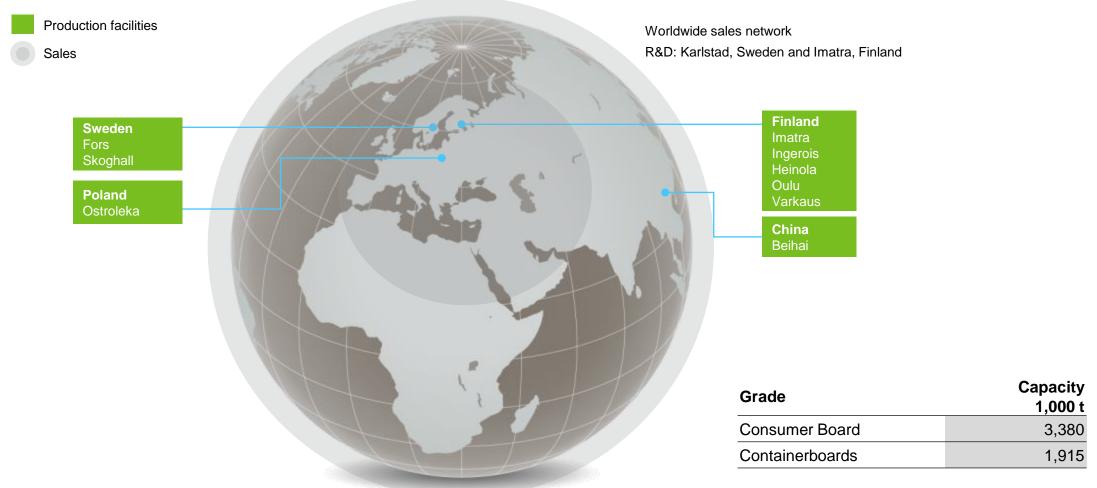




	Divisional strategic target	Q4/20	Q4/21	
Packaging Materials	Operational ROOC > 20%	9.2%	16.8%	

Geographical exposure – Packaging Materials





Significant growth opportunities for plastic free and circular packaging

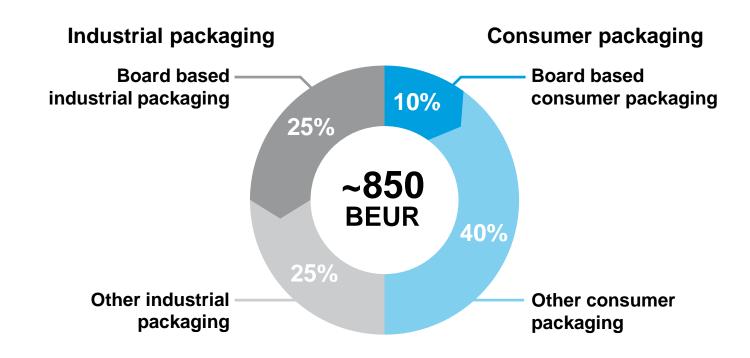


Increased disposable income & urbanisation

Growing e-commerce & on-the-go consumption

Demand for renewable & low CO₂ alternatives

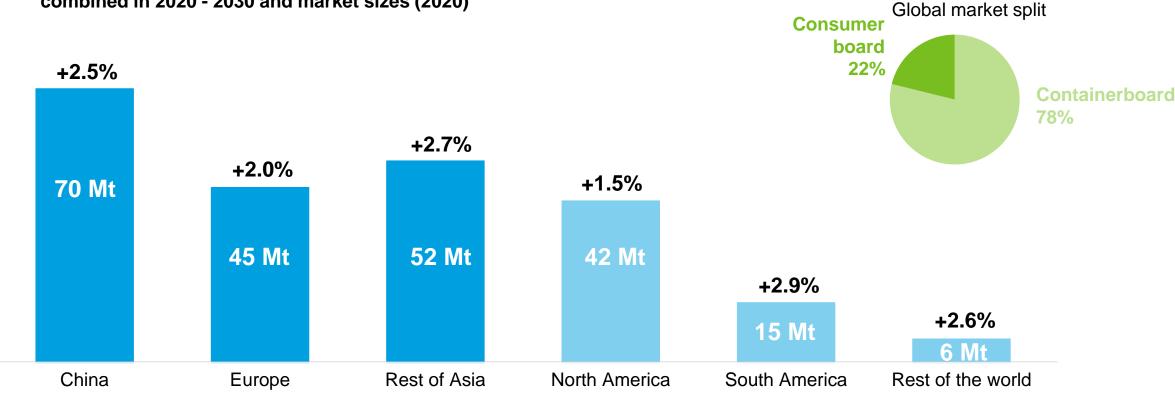
Global packaging market



Growing global markets for consumer and containerboard



Annual demand growth of consumer board and containerboard* combined in 2020 - 2030 and market sizes (2020)



^{*}Excluding sack and kraft papers

Source: Stora Enso and AFRY

Leading position in attractive packaging materials segments

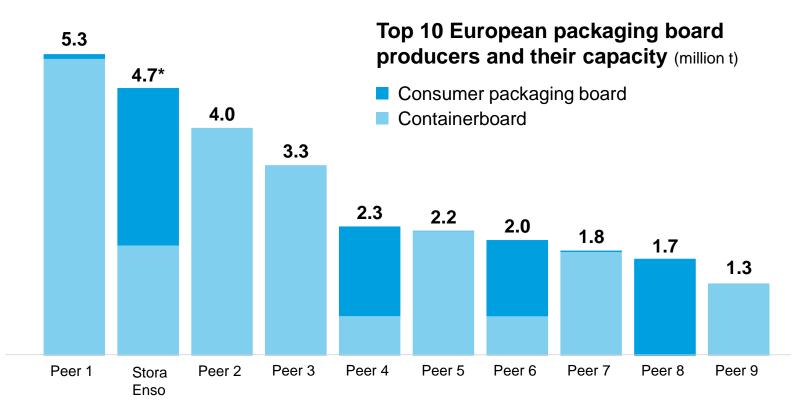


Significant presence in both consumer and industrial packaging boards

#1 in consumer board in Europe

#4 in consumer board globally

#7 in containerboard in Europe



Industrial packaging board does not include wrapping paper and sack paper
Source: AFRY, *Stora Enso Consumer Board and Containerboard excluding barrier coating capacity

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Containerboard net balance



Testliner, recycled fluting, 650,000 tonnes

SC Fluting capacity 300,000 tonnes

Kraftliner capacity 855,000 tonnes

Containerboard

Capacity 1,805,000 tonnes*

Internal consumption 339,000 tonnes

External purchases 212,000 tonnes

Balance 1,254,000 tonnes

Packaging Solutions in brief





- Packaging Solutions division focuses on growing new services and packaging solutions
- Innovation collaboration throughout the whole value chain for developing new renewable packaging
- Our high-end eco-friendly packaging products are used by leading brands across multiple market sectors, including store retail, ecommerce and industrials
- Portfolio includes corrugated and other converting, design services, automation solutions, and scalable innovations such as former fiber and circular solutions

Formed fiber products replace plastic in packaging





- Plastic free, renewable and recyclable material that can be used for various applications in food and non-food use
- Moisture and grease resistant
- Can be used for instance in bowls, plates, coffee cup lids, as well as in agriculture, electronics and cosmetics packaging to replace plastic parts
- Products are made from various pulps by pressing it into a desired shape in a molding machine

DuraSense® by Stora Enso – gradually replacing plastics with circular solutions



- Circular solutions enable the use of renewable wood in products typically produced from plastics, such as disposable cutlery, furniture, as well as storage and logistics goods
- Includes renewable materials and can reduce the consumption of fossil-based plastic by up to 60%
- Always a better alternative than fossil-based plastic
 - For example, with wood fiber we can reduce the carbon footprint of a product up to 80%

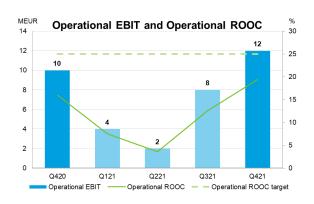


Packaging Solutions key figures





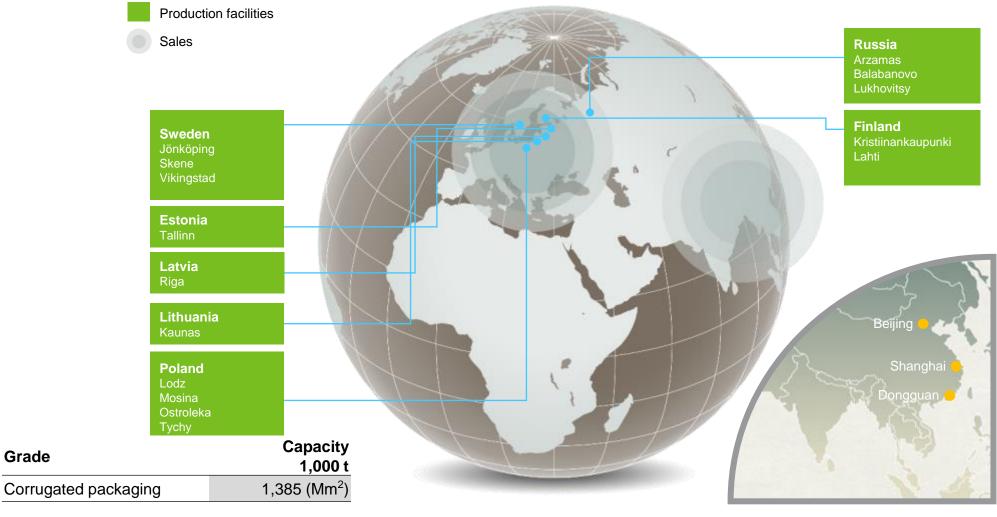




	Divisional strategic target	Q4/20	Q4/21	
Packaging Solutions	Operational ROOC > 25%	16.0%	19.4%	

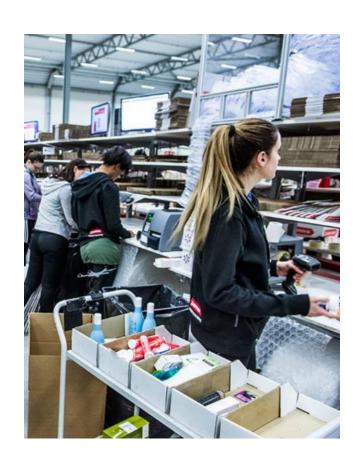
Geographical exposure – Packaging Solutions



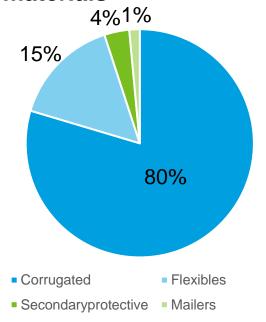


E-commerce is driving growth in packaging





E-commerce packaging by materials



Corrugated packaging growth in E-commerce

- ~15% CAGR (2020–2025)
- ~€34 billion market value globally in 2020
- In 2025, estimated global market value €67 billion and in Europe €12 billion

Note: Market values for Global and Europe (Western, Central and Eastern) in 2020 Source: Smithers The Future of E-commerce Packaging to 2025

Attractive converting positions in growing markets



Active engagement in plastic substitution

Speed in introduction of new materials and solutions

Synergies with Packaging Materials from integrated supply chain

Industrial packaging converting

Nordic countries

Annual market growth ~ 2.5%*



Baltics and Poland

Annual market growth ~ 2.5%*



Russia

Annual market growth ~ 3.5%*



Consumer packaging converting

China

Annual market growth ~ 3%*

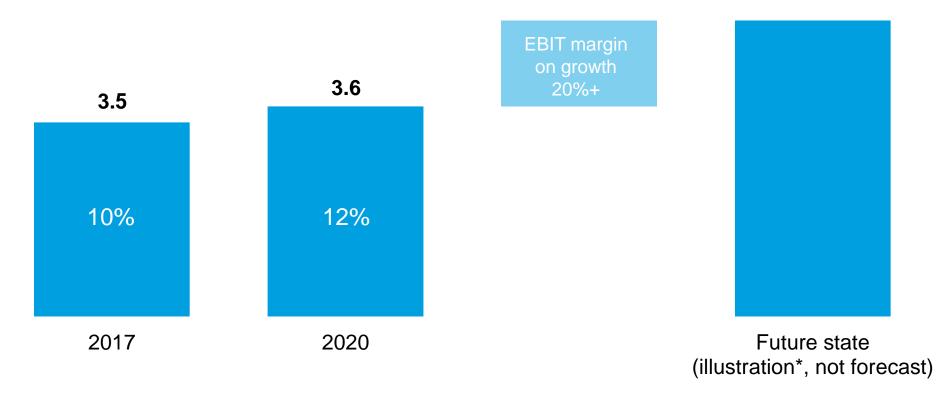


Source: RISI, ICCA, and others

Significant growth potential with 20%+ margin



Stora Enso Packaging Materials and Packaging Solutions sales (BEUR) and operational EBIT margin %





Biomaterials

- Integrated pulp producer with cost efficient stand alone assets
- Innovations to replace fossilbased products

Biomaterials division in brief



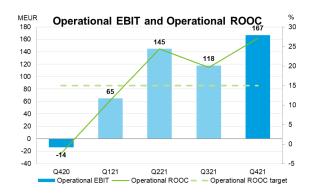


- Biomaterials division offers a wide variety of pulp grades to meet the demands of paper, board, tissue, textile and hygiene product producers
- We use all fractions of biomass, like lignin and sugars, to develop new solutions
- We work to replace fossil-based materials with new applications such as carbon for energy storage, bio-based binders, and bio-based carbon fiber

Biomaterials key figures







	Divisional strategic target	Q4/20	Q4/21	
Biomaterials	Operational ROOC > 15%	-2.4%	27.1%	

Sample product categories:

- Paper, packaging and tissue production: Supreme by Stora Enso (Softwood), Perform by Stora Enso (Hardwood) and Select by Stora Enso (Hardwood)
- Fluff pulp for hygiene products (diapers, feminine care and adult incontinence products and for non-woven airlaids: NaturaFluff by Stora Enso
- Lignin: bio-based carbon for energy storage (Lignode® by Stora Enso), bio-based binders (NeoLigno® by Stora Enso), bio-based carbon fiber (NeoFiber® by Stora Enso), bio-based phenol replacement (Lineo® by Stora Enso)
- By-products: tall oil, turpentine

Main competitors include UPM, Metsä Fibre, Södra, Arauco and Suzano













Stora Enso

Biomaterials worldwide



Grade	Capacity 1,000 t
Short-fiber pulp	1,400
Long-fiber pulp	450
Fluff pulp	350
Group net market pulp	2,350





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Global market pulp demand expected to grow steadily in the long-term



Market demand for Stora Enso's pulp grades

Softwood pulp

CAGR ~ +0.5% (2022-2026)

Market pulp demand in '22: 20.4 Mt

Fluff pulp

CAGR ~ +3% (2022-2026)
Market pulp demand in '22: 6.8 Mt

Hardwood pulp

CAGR ~ +2.5% (2022-2026)

Market pulp demand in '22: 38.9 Mt

Unbleached kraft pulp

CAGR ~ +4% (2022-2026)
Market pulp demand in '21: 3.0 Mt



Digitalisation



Urbanisation



Growing middle class



Global warming



Eco awareness



Changing lifestyles



Growing population

Source: Afry

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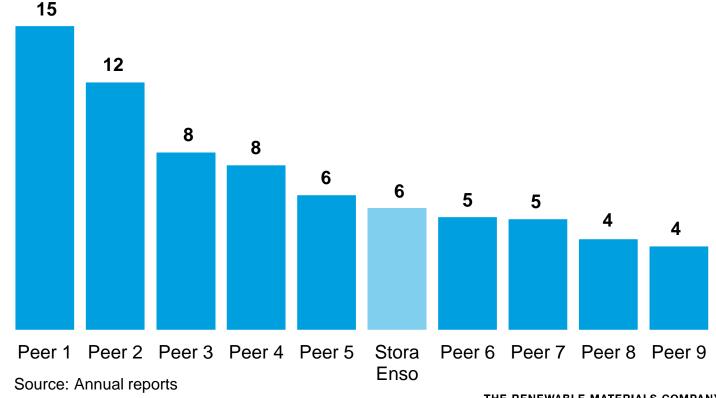
Integrated producer with cost efficient stand alone assets



One of the top 10 largest chemical pulp producer globally

~60% of all our pulp is used internally

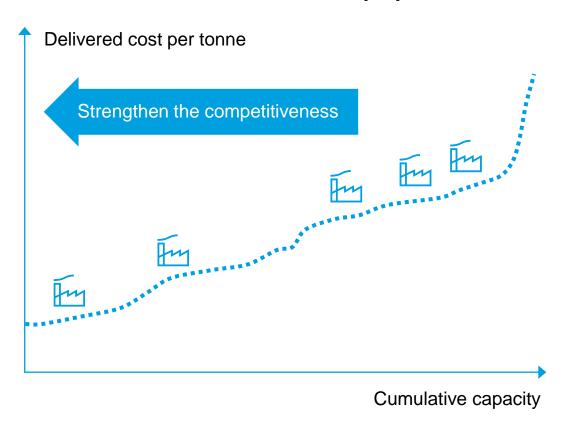
Top 10 chemical pulp producers globally and their capacity (million t)



Focus on strengthening competitiveness



Delivered cost – Standard market pulp

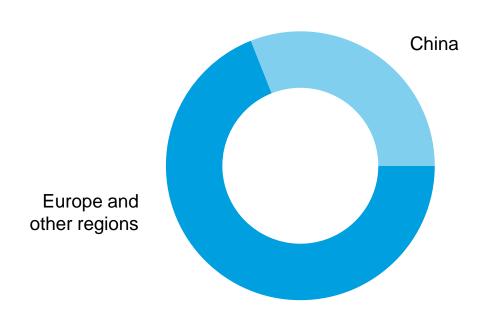


- Market pulp not a focus area for growth
- Investments in integrated pulp to support Packaging Materials
- Maintain cost competitiveness of the eucalyptus production units

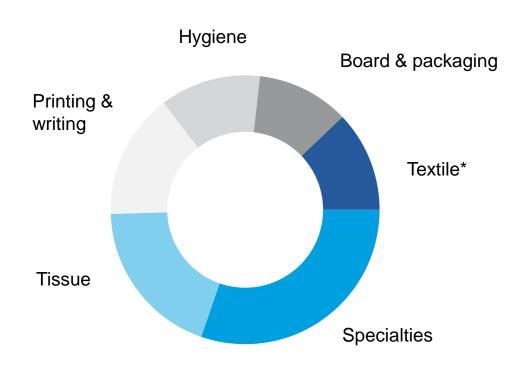
High exposure to growing markets and end usages



Biomaterials' sales mix geographically in Q4 2021



Biomaterials' sales mix by end use in Q4 2021



^{*}Dissolving pulp deliveries and production ceased in Q4/20221



Wood Products division in brief



- One of the largest sawnwood producer in Europe and a leading provider of sustainable woodbased solutions for the construction industry
- The product range covers all areas of construction, including massive wooden elements and wooden components
- It also includes a variety of sawn timber goods and pellets for sustainable heating
- High demands with regard to safety, quality, design and sustainability
- Customers are mainly merchants and retailers, industrial integrators and construction companies



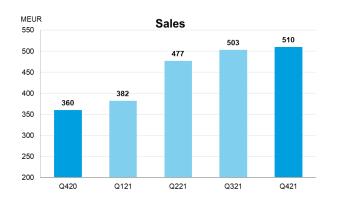


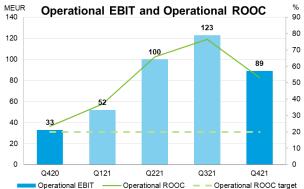




Wood Products key figures







	Divisional strategic target	Q4/20	Q4/21	
Wood Products	Operational ROOC > 20%	23.5%	53.1%	

Sample product categories:

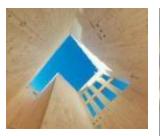
- Classic sawn
- Classic planed
- CLT (Cross laminated timber)
- LVL (Laminated Veneer Lumber)
- Construction beams
- Window and door components
- Building Solutions
- Building Components
- ThermoWood
- Pellets

Main competitors include Binderholz, Holzindustie Schweighofer, SCA Timber and Metsä Fibre













Our operations well positioned in Europe









€1.9 billion



5.7 Mm³

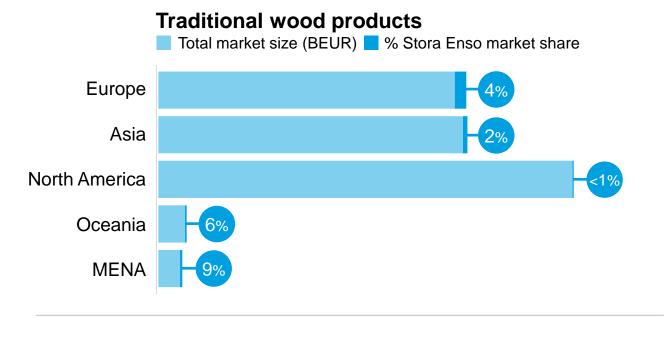
Grade	Capacity
Sawn goods	5.7 Mm ³
Further processing	2.5 Mm ³
CLT	270,000 m ³
LVL	75,000 m ³
Pellets	520,000 t

One of the leading players in Europe and globally



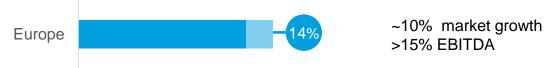
One of the largest players in traditional wood products and building solutions

Global reach with > 35% sales in overseas markets



Mass timber Building Solutions

% Stora Enso market share, total market size in 2021 (MEUR)



Strong foundation for Building Solutions growth



Traditional wood products

- ~5% operational EBIT -margin business over a cycle
- ~2% market growth
- Platform for building solutions and fiber supply to pulp mills

Building Solutions

- ~20% operational EBIT -margin business
- ~10% market growth
- Opportunities to take a larger part of value chain with new business models and services

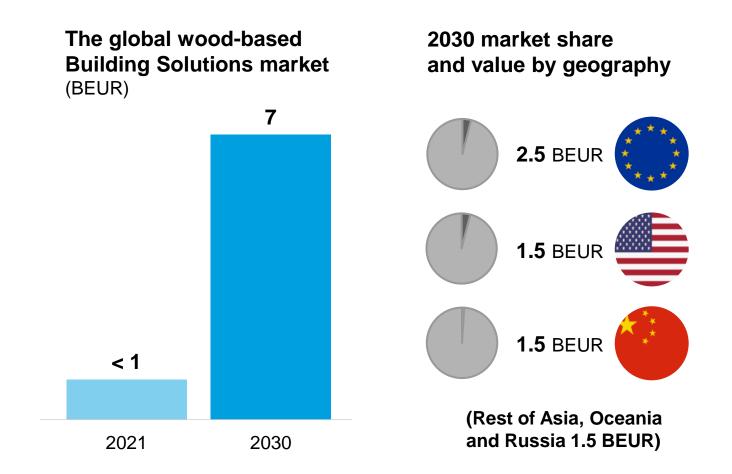
Attractive growth opportunities in Building Solutions



Carbon storage & safer workplaces

Lower building costs & faster construction

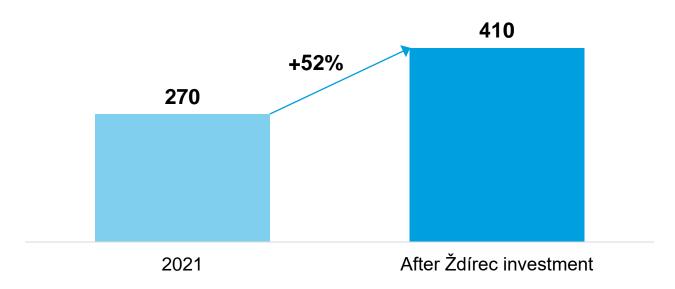
Policies promoting wooden construction



New CLT line in Czech Republic will start ramp-up **during Q3 2022**



Stora Enso Cross Laminated Timber (CLT) capacity (k m³)





Ongoing investment to further enhance position as a global market leader in CLT



- Ongoing €79m investment in a new production line for CLT at Ždírec sawmill in the Czech Republic
- Further improve out capabilities to offer a highquality range of building solutions for our customers around the world
- Annual sales approximately €70m
- Expected to meet Wood Product division's 20% operational ROOC target when run at full capacity
- Ramp-up to start during Q3 2022
- Annual production capacity 120,000 m³



Capturing a larger share of the value chain



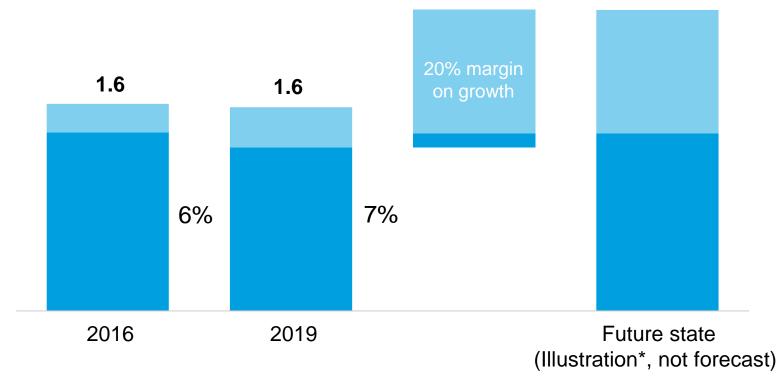


Ambition to triple sales from Building Solutions



Wood Products' sales split and operational EBIT margin

- Traditional wood products
- Building Solutions



Forest division in brief





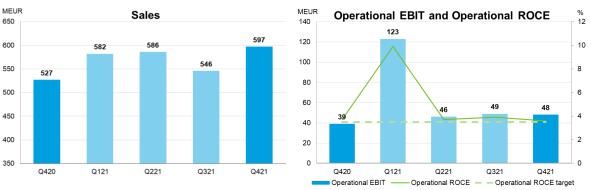
*Tornator owns more than 700 000 hectares of forest in Finland, Estonia and Romania

- Includes Stora Enso's Swedish forest assets and the 41% share of Tornator* as well as wood supply operations in Finland, Sweden, Russia and the Baltics
- Division creates value with sustainable forest management, competitive wood supply to Stora Enso's production units and innovation
- We are one of the biggest private forest owners in the world

Forest key figures







	Divisional strategic target	Q4/20	Q4/21	
Forest	Operational ROCE > 3.5%	3.7%	3.6%	

The leader in sustainable forest management





Biodiversity

Preserving local biodiversity and culture



Climate benefits

Capturing C0₂ from the atmosphere



Land use

Safeguard ecosystems while optimising social benefits from efficient land use



Community

Maintain prosperity of communities close to our operations

Innovation to increase forest growth Tree breeding and **Precision forestry** and digitalisation biotechnology Accurate and timely Increased yield, disease operations and efficient use

of digital opportunities

Sustainability and biodiversity

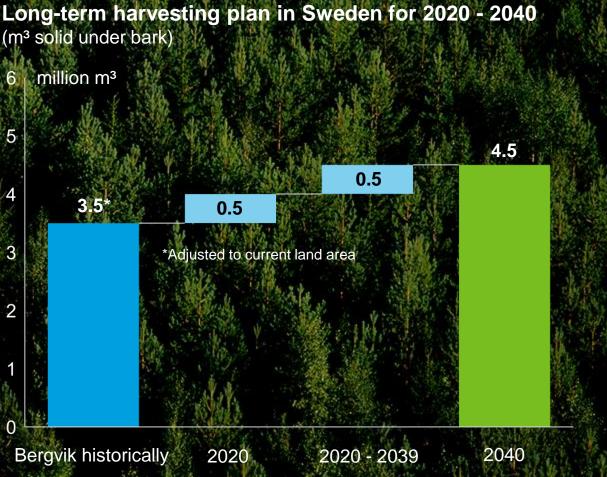
Best in class forestry practices and holistic biodiversity measurements resistance, and improved wood properties

Target to increase sustainable harvesting by 10 - 15% in Sweden



Innovation and forest management driving higher harvesting

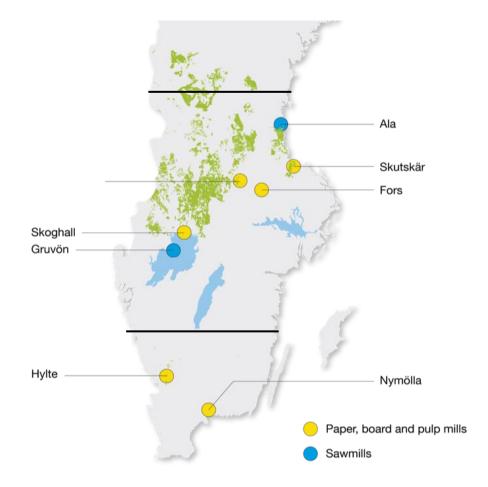
Target to increase standing stock



Swedish forest assets mainly located in Central Sweden



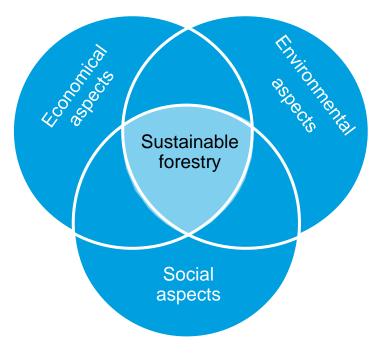
- We are targeting to increase harvesting volumes by 10–15% in our Swedish forests by 2040
- Secured availability and reasonably priced wood for the Swedish mills
- Own Swedish forests represent:
 - ~50% of raw material needs in Sweden
 - ~70% of raw material needs in Central Sweden
- Own forests give tactical flexibility and additional synergies in wood supply
- Forest assets locations at the end of 2021:
 - 83% in Central Sweden
 - 17% in Northern Sweden



Sustainable forest management – we are not compromising biodiversity



Forest growth Productivity



Jobs in rural areas
Dialogue with indigenous people
Recreation considerations

Growing forests good for the climate Protecting biodiversity Limit impact on soil and water

Stora Enso regenerated forest by planting

62m

seedlings in 2020

98%

of the lands Stora Enso owns or manages were covered by forest certification schemes





Stora Enso invested

€68m

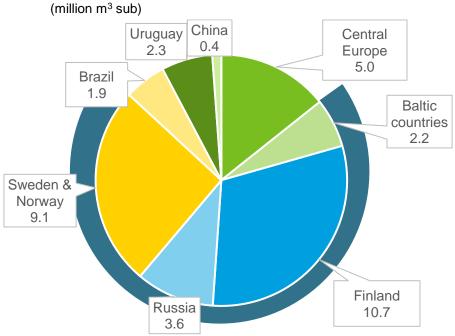
in future growth through silviculture and fertilisation in 2020

Controlling ~30% of wood supply and a #1 Nordic position are competitive advantages



#1 Nordic position

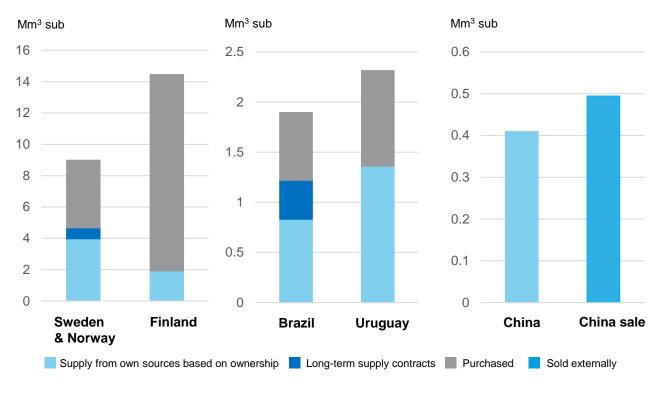
Wood procurement by region in 2020



Central Europe, China, Uruguay and Brazil are integrated to business divisions.

Total amount of wood (incl. roundwood & wood chips) delivered to Stora Enso mills was 35 million cubic metres* in 2020.

We control ~30% of our wood raw material consumption (million m3 sub)



Paper division in brief

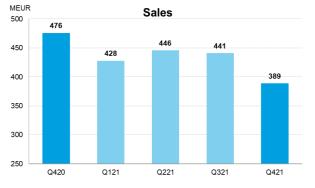


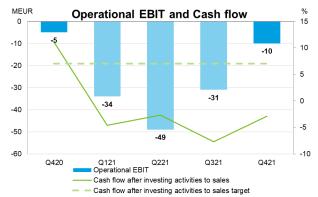
- Renewable and best-in-class paper solutions for print media and office use from virgin wood and recycled fibers
- Customers include publishers, retailers, printing houses, merchants, converters and office suppliers
- The products and services meet the customers' quality and sustainability requirements
- End uses: newspapers and supplements, books, magazines, advertising, notebooks, office
- Focus on further developing the sustainability and efficiency of operations



Paper key figures







	Divisional strategic target	Q4/20	Q4/21	
Paper	Cash flow after investing activities to sales >7%	11.1%	-2.9%	

Sample product categories

- Paper selection for print media: Newsprint and book papers, Uncoated mechanical papers (SC)
- Paper selection for office use: transactional needs, office printing, writing and educational needs (Brands: e.g 4CC, MultiCopy, Zoom)

Main competitors include UPM, Norske Skog, Holmen and The Navigator Company













Paper capacity

storaenso

Grade	Capacity 1,000 t
Newsprint and book paper	1,390
Uncoated Magazine (SC)	685
Uncoated Fine	485
Paper Total	2,560

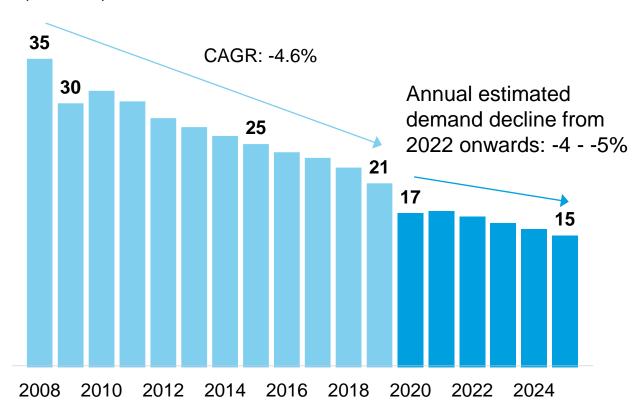


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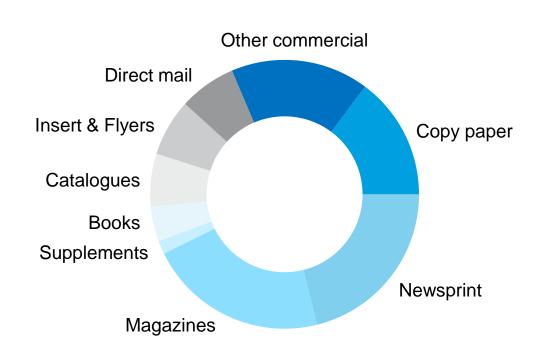
Structural paper demand decline continues



European paper (Excl. woodfree coated) demand (million t)



European paper demand by end use



Higher operational independence to adapt to challenging market conditions



Increased focus on the particular needs of the Paper business

Fit-for-purpose processes and tools

Allowing scalability of costs





Innovations

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Increased focus on our innovation agenda





Sustainable packaging applications to replace fossil materials

Formed fiber Biofoam



Bio-based barrier solutions for packaging



Biomaterials Innovation

Carbon for energy storage
Bio-binders
Carbon fibers

Focus on innovations



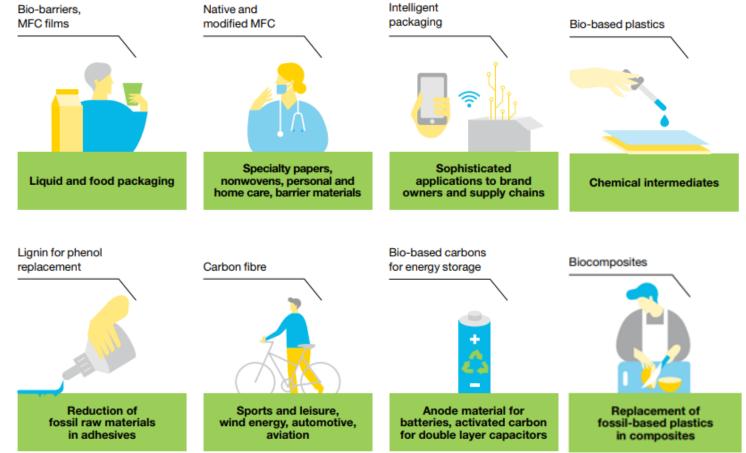
In 2020, Stora Enso's expenditure on research and development was €146m, which was equivalent to 1.7% of sales

Over 440 patents granted worldwide in 2020



Innovation projects with high potential impact to transformation





Textiles and nonwovens

Dissolving pulp

Innovation in packaging

Advancing the renewable packaging industry with innovations



THE RENEWABLE MATERIALS COMPANY

Microfibrillated cellulose (MFC)

Biobarrier coatings

Circular solutions

Design driven innovation

Significant opportunities for new sustainable packaging



Formed fiber



Wood foam



Biobarriers and films



Market growth (CAGR 2020 - 2030)	3%	6%	3%
Total market size (€ billion)	30	17	80
EBIT margin potential	30%	35%	Supporting existing business

1st production line in Hylte

Pilot plant in Fors

Capacity investment in Forshaga

Micro-fibrillated cellulose improves product properties and can replace fossil-based materials



Today

 MFC is used to make more durable, lighter, highquality packaging products

Future potential

- Barrier coating solutions for grease and oxygen barriers
- Biodegradable replacement for aluminium foil
- Carrier for example in cosmetics
- 3D printing





Bio-based barriers for aseptic liquid packaging

Development of new breakthrough technologies



- Focus on breakthrough innovations to solve future barrier needs for aseptic liquid packaging
- Bio-based materials to replace present PE and aluminum foils
- New solutions to meet the future requirements for circular design





Formed fiber – Market size €30 billion

Storgenso

Renewable and recyclable material for applications in food and non-food use

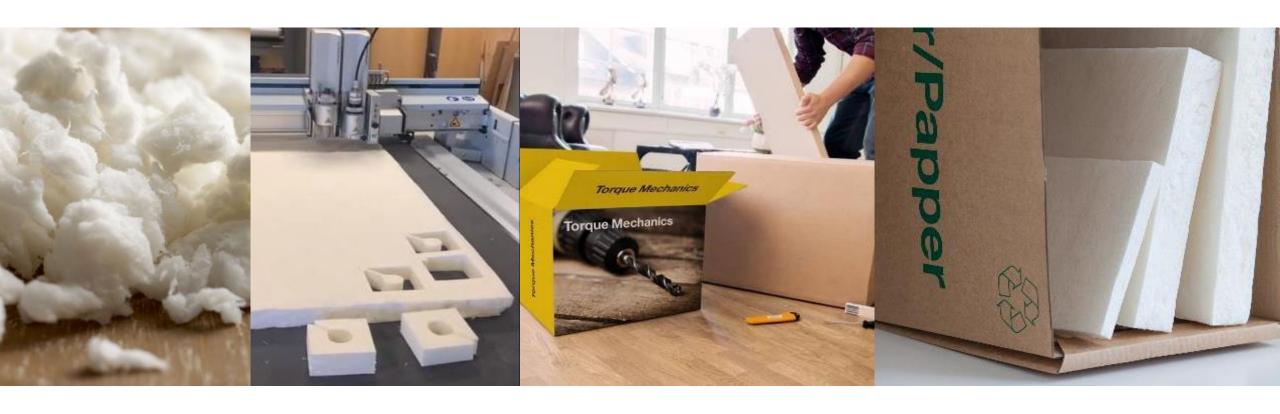




Wood foams – Market size €17 billion

Demand driven by making protective packaging more sustainable





Circular Solutions – gradually replacing plastic



- Use in products, such as disposable cutlery, furniture, as well as storage and logistics goods
- Raw material for markets where plastics dominate
- Can reduce the consumption of fossil-based plastic by up to 60%
- Always a better alternative than fossil-based plastic
 - Reduce the carbon footprint of a product up to 80%



Target market 4.5 Mt 1-5 years









Innovation in Biomaterials



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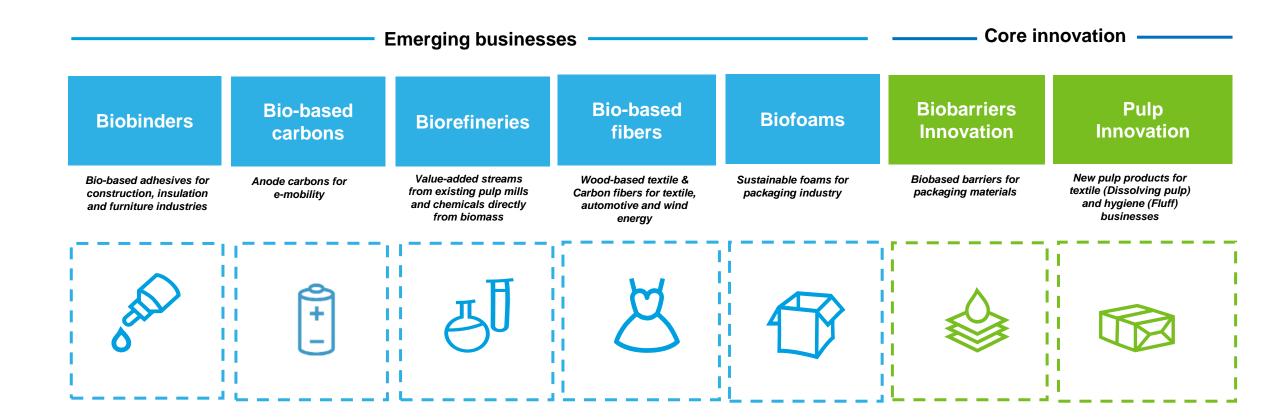
Innovation areas

Increased focus on lignin

Carbon for energy storage, biobinders and carbon fibers

Platforms of innovation for sustainable profitable growth





Highly attractive innovation areas















Carbon for energy storage

Bioplastics (FDCA)

Formaldehyde-free binder

TreeToTextile

Carbon fiber

Biofoams

Biomaterials Innovation

Our biochemical platform in lignin



- Lignin recovery from black liquor at the Sunila in Finland, capacity 50,000 t/a
- Pilot plant for the production of bio-based carbon materials now completed
 - Lignin-based carbon for batteries in consumer electronics, the automotive industry, and energy storage systems



Some uses of lignin



Adhesives and binders



Carbon fiber



Bio-based carbons

Lignode, wood-based carbon for batteries





- Driven by electrification of vehicles, consumer electronics and large-scale energy storage systems
- More than 450,000 tonnes of carbon material needed in Europe by 2025
- Strategic material for which Europe does not have local supply
- €1 billion sales potential already by 2025
- Ramping up production of Lignode in our pilot plant in Sunila
 - Replacing conventionally used graphite from coal mines
 - Bio-based with lower carbon footprint, cost-competitive and high-performing
- Exploring strategic partnerships to accelerate scale-up and commercialisation



Fast scale-up through partnering: 5 anode mills in 5 years

- The partnership for 5 anode mills will mean:
 - -80-100kt capacity
 - 15% market share in Europe
 - -€1 billion sales
 - 50% EBITDA margin potential
 - Estimated capex €1.0-1.5 billion for the partnership
- €50m capex invested in Lignode and other lignin-based carbons since 2015
- Establishing European supply of strategic material
- Pulp mills in the Nordics serve as source for initial production



^{*}Subject to completing piloting in Sunila Mill

Pathway to the ambition

- Partnering speeds up market readiness
 - Single production unit from design to production takes 4 years.
 Design phase started early 2021
 - Qualification processes can take 3 years
 - Plan includes concurrent construction of several production sites
 - Scale-up is built on standardised 20kt units
 - Building 1-2 plants/yr after piloting phase takes 1-2 years



Tenfold growth of anode materials by 2025

Needed to balance European demand





Biobinders – Target market size €5 billion

NeoLigno® for safe and healthy everyday living





Bio-based carbon fiber – Market size €5 billion

Demand driven by wind energy, automotive aerospace & defence industries

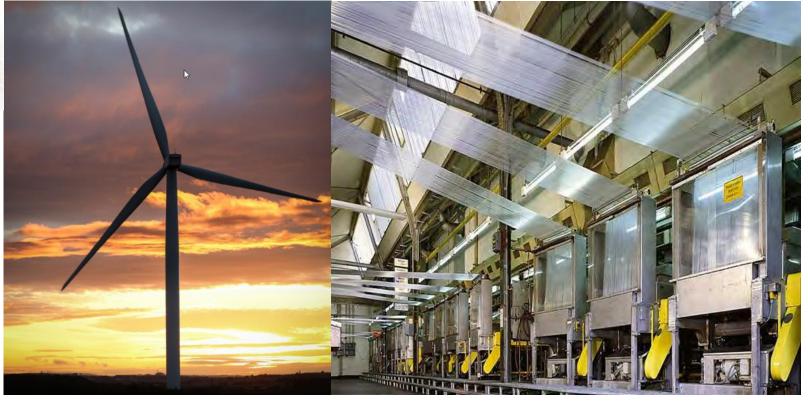












TreeToTextile - Market size 30M t/a in 2020*



New technology to produce sustainable textile fiber from trees



*Natural textiles (cotton and man-made cellulosic) are the best target markets for TTT

New biomaterials are a highly attractive innovation platform



	Carbon for energy storage	Bio-binders	Carbon fibers
	storgenso		533
Market growth (CAGR 2020 - 2030	30%	2 - 4%	8 - 10%
Total market size (billion, EUR)	10	20	5
EBIT margin potential	35%	35%	35%
	Pilot plant in Sunila	1st production line in Sunila	Pilot ongoing in JD with Cordenka

Innovation in Wood Products



Product innovations

Building Systems

Digitalisation

From a classic sawn producer to a leading provider of innovative wood-based solutions





Classic sawn



Cross Laminated Timber (CLT)



Laminated Veneer Lumber (LVL)



Building Solutions



Industrial components



Construction beams



Pellets



Online services and e-business

Building Systems driving growth





Find the film from Stora Enso's YouTube page (youtube.com/storaenso), or use a direct link youtube.com/watch?v=3El9hhp_T5k

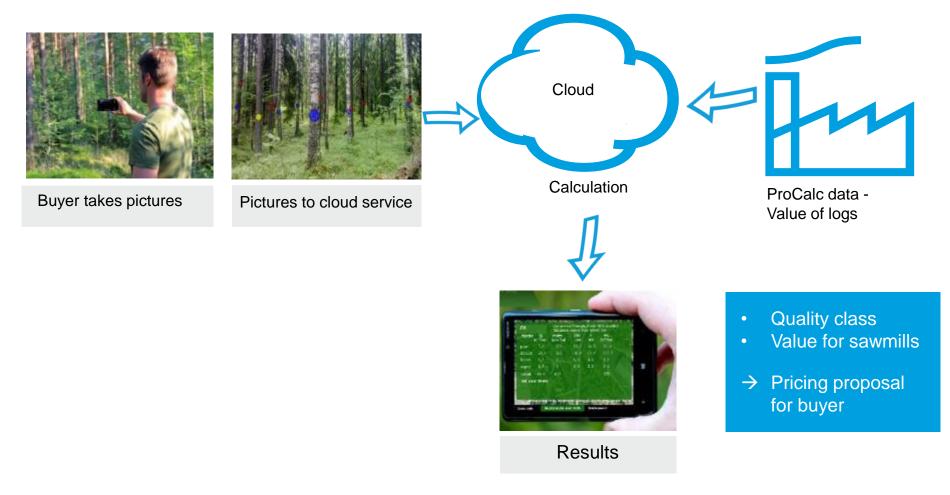


Residential multi storey modular construction



New ways of improving efficiency through digitalisation – Forest categorisation & log value





Digitalisation in Wood Products





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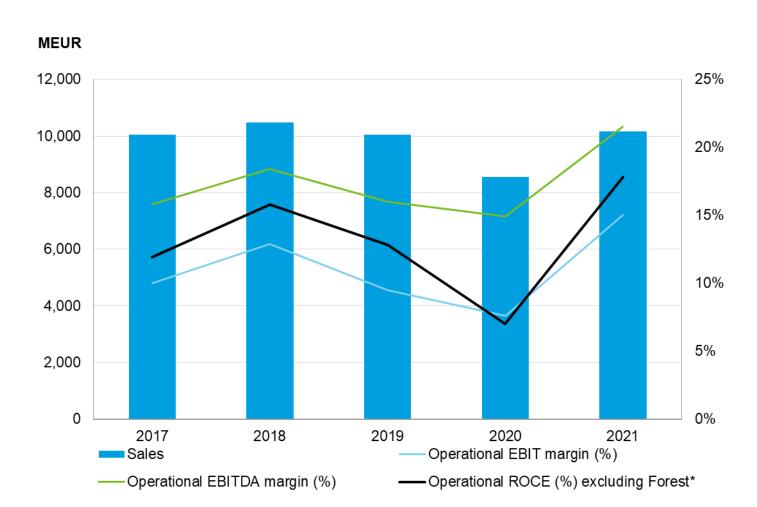
Stora Enso



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

Financial performance - Group

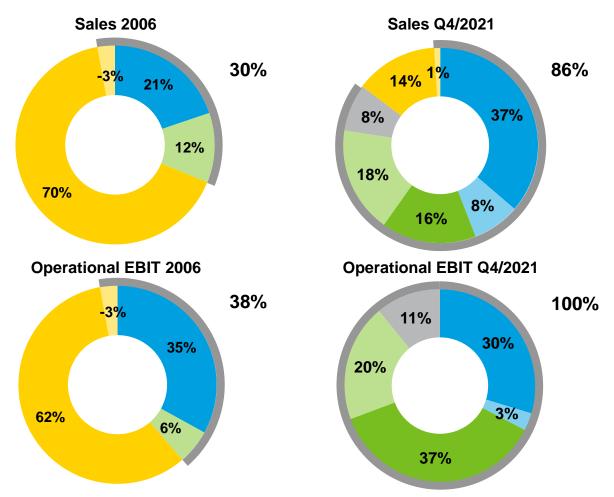




^{*} Group operational ROCE before 2018 Historical figures before 2018 not restated

Growth businesses 86% of sales and 100% of operational EBIT





Packaging Materials Packaging Solutions¹ Biomaterials Wood Products Forest Paper² Other & eliminations³

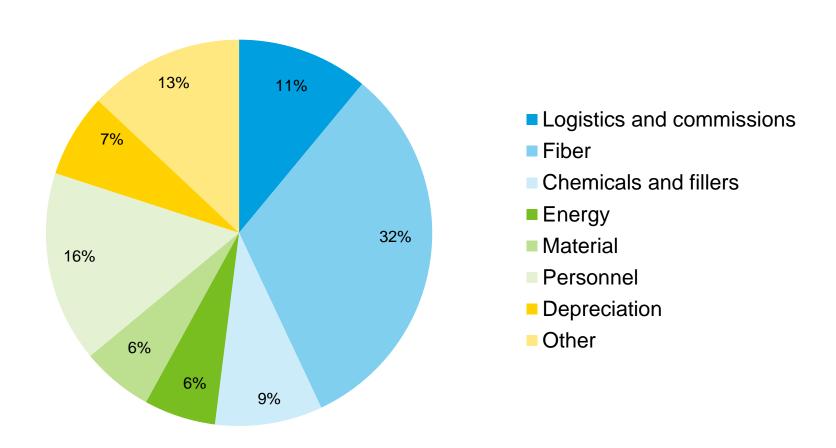
¹ In 2006 included in Packaging Materials

² In 2006 includes merchants

³ In 2006 includes Forest

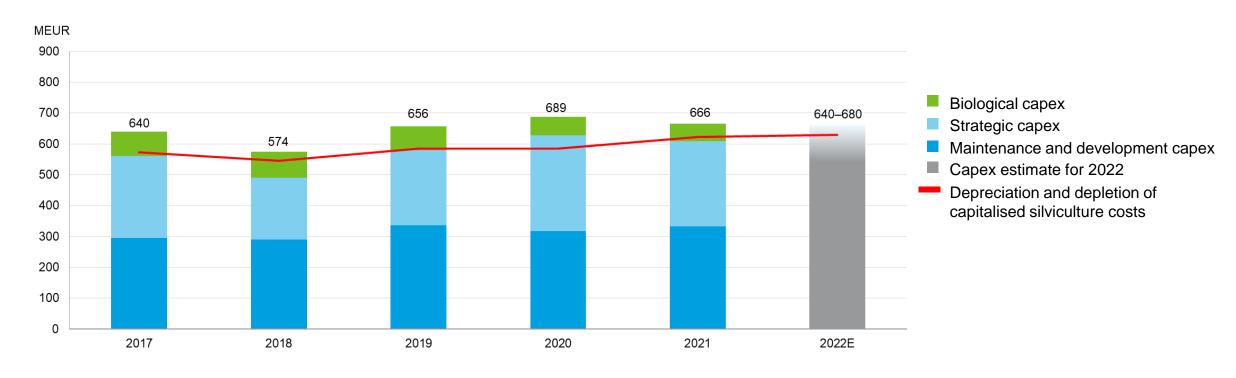
Cost structure 2020 % of costs





Selective capex to support growth

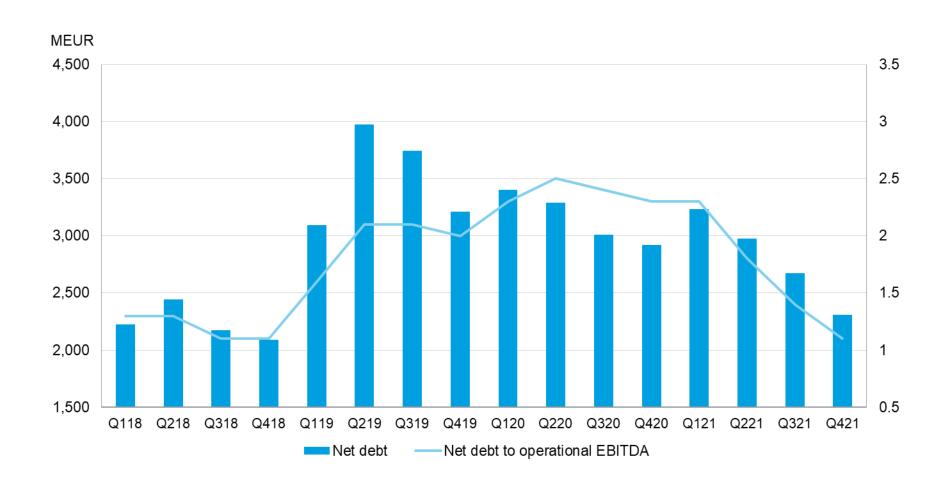




Capex for 2019-2021 and estimate for 2022 include the capitalised leasing contracts according to IFRS 16 Leases standard

Year-on-year net debt/OpEBITDA

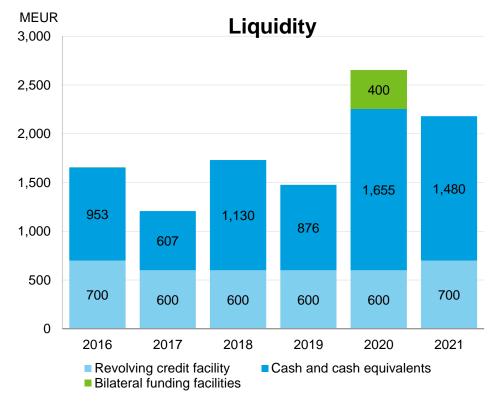




Continued focus on strong liquidity



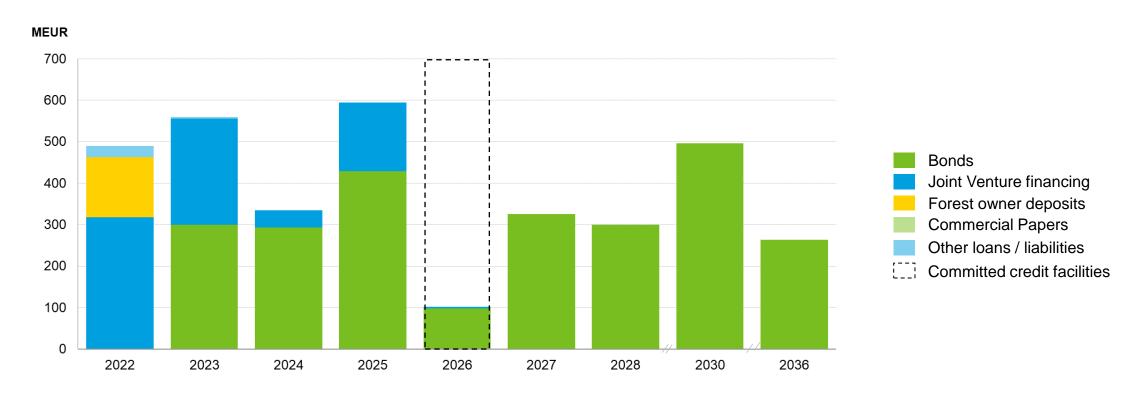
- Liquidity at the end of Q4 2021:
 - €1,480m cash and cash equivalents
 - €700m committed revolving credit facility fully undrawn
 - €1,000m statutory pension premium loans available
- No financial covenants on Stora Enso Oyj's debt
- Net debt to operational EBITDA for the last 12 months at 1.1x and gearing at 22%



At the end of the period

Maturity profile Q4 2021





Committed credit facilities are fully undrawn and mature in 2026 (€700m)

Sustainability in our funding and reporting



Revolving Credit Facility with a green aspect

Pricing incudes sustainability component based on ability to reduce greenhouse gas emissions.



Green Bond Framework

A loan-format to support sustainability-focused fixed income investors and to report environmental impacts.



Green Bonds

Integrated sustainability agenda to our funding by using Green Bond Framework



Sustainable Finance strategy

The aim is to influence and develop the financial markets and to secure funding partners with sustainability agenda.



Climate-related financial disclosure

CFO support for better disclosure of climate risks and opportunities based on recommendations by the Financial Stability Board's Task Force on Climate-related Financial Disclosures (TCFD).



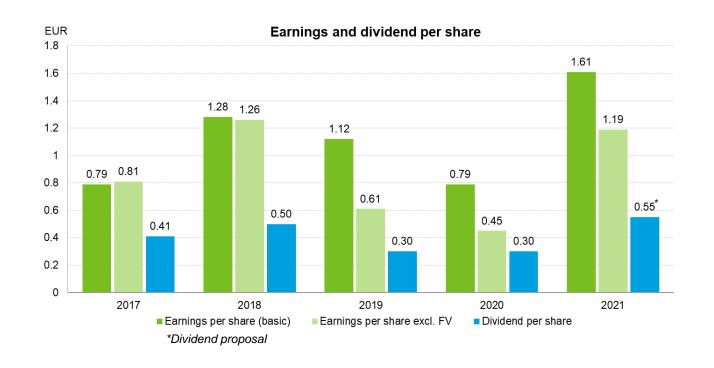
Integrated reporting

The World Business Council for Sustainable Development (WBCSD) Redefining Value Board and programme: work on international reporting frameworks, materiality assessment standards, and data assurance methodologies.



Dividend increased to an all-time high of €0.55 per share





- Dividend policy to distribute 50% of EPS, excluding fair valuation, over the cycle
- Dividend proposal of €0.55 per share for 2021 totalling €434m, an increase of €0.25 per share from 2020

Ownership Distribution as of 31 December 2021



	% 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)	11.3%	8.2%
Swedish institutions (excl. FAM)	5.5%	4.8%
Swedish private shareholders	4.2%	2.7%
Finnish private shareholders	3.8%	2.3%
ADR holders	1.8%	0.6%
Under nominee names (non-Finnish/non-Swedish shareholders)	49.6%	16.7%

^{*} Entirely owned by the Finnish State

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[%] of shares held

Major Shareholders as of 31 December 2021



By voting power	A shares	R shares	% of shares	% of votes
1 Solidium Oyj*	62,655,036	21,792,540	11	27.3
2 FAM AB**	63,123,386	17,000,000	10	27.3
3 Social Insurance Institution of Finland (KELA)	23,825,086	0	3	10.0
4 Ilmarinen Mutual Pension Insurance Company	4,172,492	17,749,856	3	2.5
5 Varma Mutual Pension Insurance Company	5,163,018	1,140,874	1	2.2
6 MB-Bolangen i Vetlanda AB (incl. Stiftelsen Seydlitz Småland)	4,885,000	1,000,000	1	2.1
7 Elo Mutual Pension Insurance Company	2,000,000	7,441,225	1	1.2
8 Erik Johan Ljungberg's Education Foundation	1,780,540	2,336,224	1	0.8
9 SEB Investment Management	0	9,919,387	1	0.4
10 Bergslaget's Healthcare Foundation	626,269	1,609,483	0	0.3
11 The State Pension Fund	0	5,000,000	1	0.2
12 Unionen (Swedish trade union)	0	3,332,750	0	0.1
13 The Society of Swedish Literature in Finland	0	3,000,000	0	0.1
14 Avanza Pension Insurance	146,151	1,324,521	0	0.1
15 SEB AB, Luxembourg Branch	2,177	2,071,635	0	0.1
16 Nordea Pro Finland Fund	0	1,871,982	0	0.1
17 Danske Invest Finnish Equity Fund	0	1,840,000	0	0.1
18 Swedbank Insurance	21,708	1,502,255	0	0.1
19 Länsförsäkringar Portfolio Management AB	0	1,628,046	0	0.1
20 S-Stock Oy	0	1,535,000	0	0.1
20 largest total	168,400,863	103,095,778	34	75.2

^{*}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.

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Sponsored ADR Programme



Stora Enso has established a sponsored Level I ADR programme in the US. The ADRs trade on the premier tier of Over-The-Counter ("OTC") market in the US. 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

Please contact the Citibank's dedicated ADR broker desks:

Scott Pollak (New York) Mike Woods (London)
Tel: +1 212 723 5676 Tel: +44 20 7500 2030

Group Leadership Team





President and CEO Annica Bresky



CFO Seppo Parvi



Chief Strategy and Innovation Officer Tobias Bäärnman



Packaging Solutions David Ekberg



Biomaterials Johanna Hagelberg



Paper Kati ter Horst



Packaging Materials Hannu Kasurinen



HR Katariina Kravi



Legal Per Lyrvall



CIO and Head of IT & Digitalisation Teemu Salmi



Sustainability Annette Stube



Forest Jari Suominen



Wood Products Lars Völkel

Board of Directors





Antti Mäkinen since March 2018 Chair



Håkan Buskhe since June 2020 Vice Chair



Elisabet Fleuriot since April 2013



Hock Goh since April 2012



Helena Hedblom since March 2021



Mikko Helander since March 2019



Christiane Kuehne since April 2017



Richard Nilsson since April 2014



Hans Sohlström since March 2021

SASB reporting for investors



- Stora Enso started to report in 2020 against the Standards by the Sustainability Accounting Standards Board (SASB) which aims to improve sustainability reporting for investors
- Relevant standards within SASB's Renewable Resources & Alternative energy section
 - Forest Management
 - Pulp & Paper Products
- Specific indicators in these two Standards relate to financially material topics in the industry such as sustainable forest management and certification, GHG emissions, air quality, energy management, water management and supply chain management



SASB is an independent non-profit organisation that develops its standards based on extensive feedback from companies, investors and other market participants as part of a transparent, publiclydocumented process.

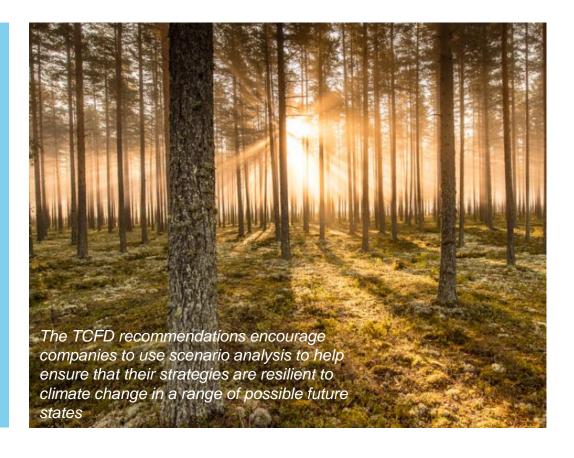
Link to SASB online index:

https://www.storaenso.com//media/Documents/Downloadcenter/Documents/Annualreports/2020/STORAENSO_SASB_2020.pdf

Our progress with TCFD



- TCFD is a framework for disclosing climaterelated risks and opportunities that goes beyond current practices
- Our first TCFD disclosure in the Annual report 2019
- Our work focused on a qualitative scenario assessment for physical climate-related risks and opportunities in the Nordic forests
- TCFD index table available for investors



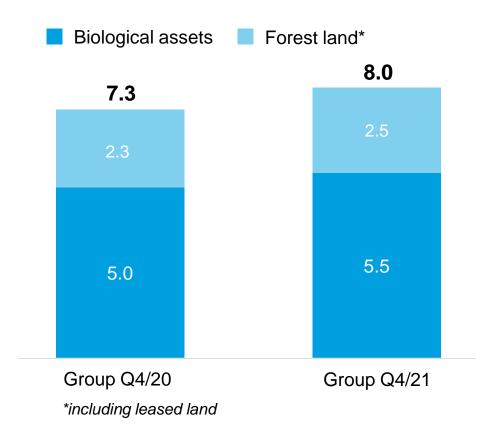


Forest assets fair value update

Forest assets fair value increased to €8 billion



Group forest assets



Market transaction based valuation method in Sweden

- Market transactions from Stora Enso forest regions (Northern and Central Sweden)
- Standing stock and price data of the traded forest (Price per m3fo (SEK))
- Volume weighted three year average transactions from Ludvig & Co and Areal statistics

Tornator (41%) and plantations

- DCF method
- Plantations' forest land at historical cost

Forest fair valuation methodology



Sw	ed	len
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Tornator (41%) (Finland, Estonia & Romania)

Plantations
(Brazil, Uruguay and China)

Forest assets

Market transactionbased method

Biological assets

Allocation of forest assets fair value based on DCF

DCF method

DCF method

Forest land

Allocation of forest assets fair value based on DCF

DCF method

At historical cost

Forest assets fair value increased over €400 million in Sweden during 2021



Forest assets in Sweden	Productive forest land (ha)	Productive standing stock (m³fo)	Price per m³fo (EUR)	Price per ha (EUR)	Forest land value (BEUR)	Biological asset value (BEUR)	Total value (BEUR)
Swedish forests assets as at 31 December 2020	1,145,000	143,000,000	39	4,900	1.8	3.8	5.6
Swedish forests assets as at 31 December 2021	1,141,000	150,500,000	40	5,270	2.0	4.0	6.0*

^{*}The increase of €414 million in the forest assets value is mainly driven by increased standing stock volume as well as higher market prices

Deferred tax liabilities related to Swedish forest assets amounted to €1,237 (1,153) million at the end of 2021

Swedish market transaction based forest prices increased in Sweden during 2021

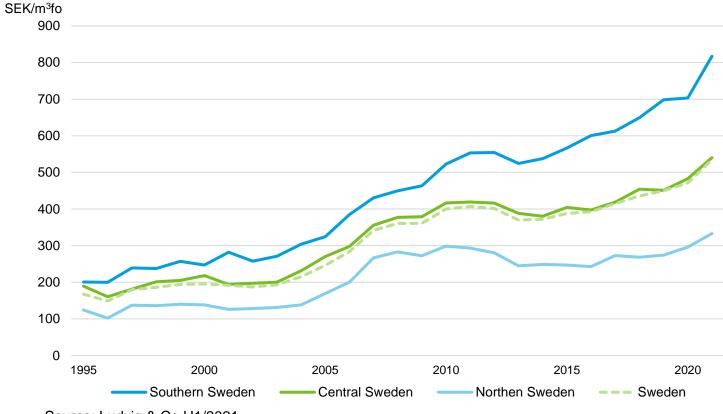


Prices increased in all regions during 2021

Large differences between absolute regional transaction prices

Stora Enso's forest asset in Sweden: 83% Central, 17% Northern

Market transaction based forest prices in Sweden



Source: Ludvig & Co H1/2021

One of the largest global forest owners with over 1.6 million ha of productive forest land



Key figures in 2021

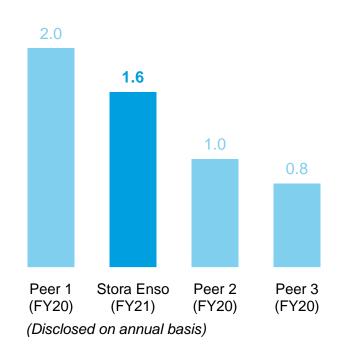
> 2 million ha of forest land and over 1.6 million ha productive forest land

~207 million m³ fo productive standing stock

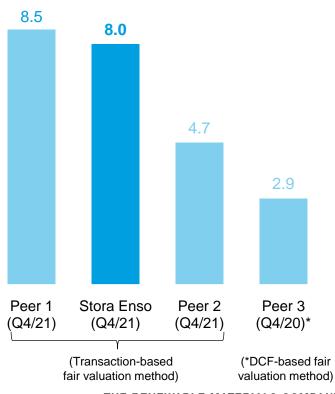
13.2 million m³ fo annual estimated growth Harvesting representing 75% of the growth

fo = forest cubic metre

Peer companies' productive forest land million hectares



Peer companies' forest assets fair valuations BEUR



THE RENEWABLE MATERIALS COMPANY



Financial results for Q4 and full year 2021

Record high quarter driven by strong demand and strategic progress

28 January 2022

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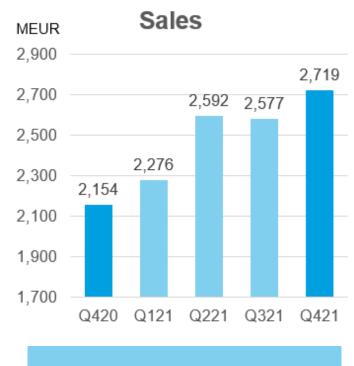


Record high quarter driven by strong demand and strategic progress

- Record high Q4 results in four divisions
- Record performances support continued commercial momentum into 2022
- Successfully mitigated higher variable input costs

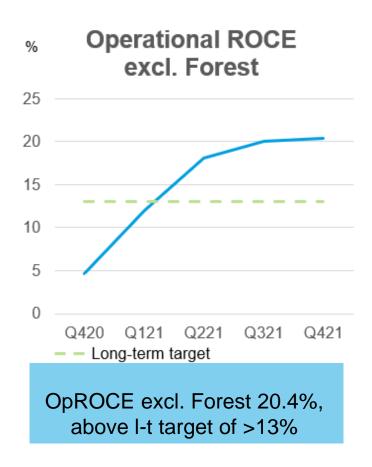
Operational EBIT continues strong trend





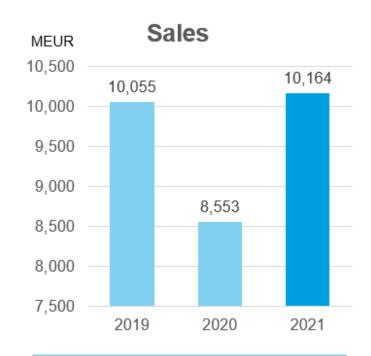




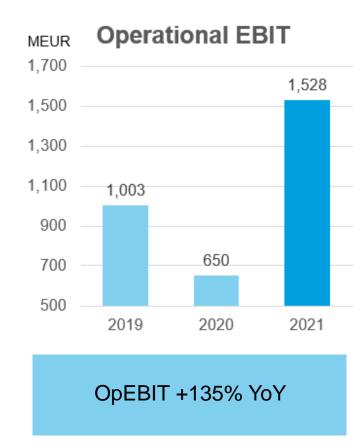


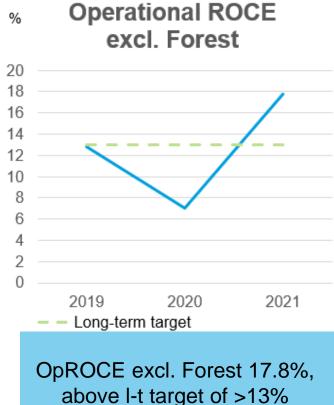
Strong annual performance







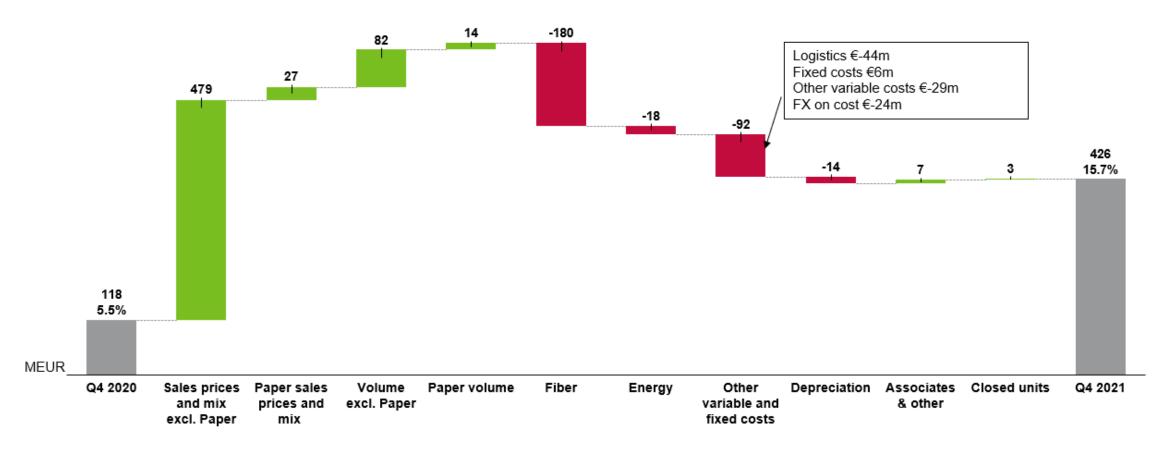




above I-t target of >13%

Higher prices major driver for increase in profitability





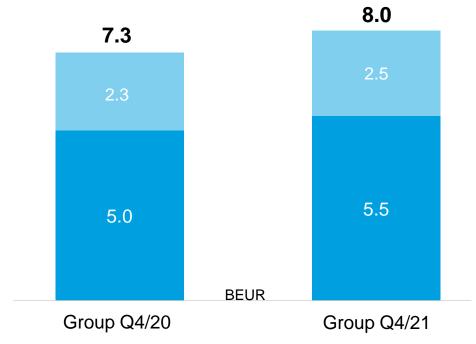


Forest assets fair value increased to €8 billion



Group forest assets





*including leased land

- Forest value €10.10 per share
- Increased forest assets fair values
 - Higher market transaction-based prices and the inclusion of retention areas in Sweden
 - Higher values in the Tornator holding
 - In plantations mainly due to positive WACC and FX related changes



Strong momentum in strategy execution



- The transformation from primarily a paper company to the renewable materials company is largely complete
- Sustainability is the opportunity driving both our short and long-term strategy
- Evolution phase to deliver long-term profitable growth
 - Closures and divestments of uncompetitive paper mills
 - Resources and capacity freed up to accelerate growth in renewable packaging and green building materials
 - Lignode project moving ahead according to plan
- Targeted investments in
 - Packaging: conversions, debottlenecking and complementary M&A
 - Building Solutions: new capacity and projects to drive growth
 - Biomaterials Innovations: new products such as lignin for various applications



Strategic initiatives supporting growth



- Expanding our positioning for growth in sustainable packaging by a €23m investment to increase containerboard capacity in Varkaus, Finland
- Ceased production of dissolving pulp to focus on growth in other existing and new innovative pulp grades and products
- Completed containerboard ramp-up and commercialisation phase at the Oulu site in Finland
- Investment of €40m to enhance operational and carbon footprint performance for fluff production at Skutskär, Sweden (announced in January 2022)



Commercialising our innovations



- Launched Performa Light CarbonZero[™], the first carbon neutral cartonboard offer in the market
- The ramp-up of the dispersion barrier technology in Forshaga site, Sweden proceeded according to plan. Commercial deliveries started during H2 2021
- Extended packaging offering with a new portfolio of bio-based foams used for protective and thermal packaging. The offering consists of fully recyclable Fibrease™ and Papira®
- Launched NaturaFluff Eco, a new oxygen-delignified fluff pulp grade with circa 30% lower carbon footprint compared to traditional fluff pulp
- Lignode to replace fossil-based anode materials in batteries for electric vehicles and other applications
- Building Solutions: launched a new building concept for industrial buildings. Low carbon, fast and simple construction and easy to disassemble and reassemble

EU Taxonomy is still in its early days





- Forest industry and its main products are largely out of the scope of the EU Taxonomy
- Therefore, only a few relevant economic activity categories to report on
 - The most relevant categories for Stora Enso are forest management in its own forests, manufacturing of wooden-based materials and components for improving buildings' energy efficiency, and bio-based electricity and heat sales

Proportion of taxonomy eligible activities		
Turnover	5%	
CAPEX	4%	
OPEX	6%	



Our leading performance in ESG is recognised



(ESG rating agencies in alphabetical order)



 Climate A-*, Forest Aand Water B



 ESG rating increased from AA to AAA (highest possible score)



 Highest recognition level (Platinum) received



• ESG rating improved from 19.6 to 18.0** out of 40.0



• ESG rating increased from 4.1 to 4.2 out of 5.0

Transition Pathway Initiative

 Top-ranked in both management quality and carbon



132 28 January 2022 Stora Enso ESG QualityScore highest possible score in Social & Environment

*Ongoing appeal process for Climate

**O being the highest possible score

***V.E. part of Moody's ESG solutions

VigeoEiris***

 ESG rating improved from 68 to 73 out of 100

THE RENEWABLE MATERIALS COMPANY

Financial highlights



Sales

+26% to €2,719m in Q4 +19% to €10,164m in 2021

OpEBIT

+262% to €426m in Q4 +135% to €1,528m in 2021

EPS (basic)

€0.78 in Q4 €1.61 in 2021

Oproce excl. Forest

20% in Q4 18% in 2021

Cash flow from operations

€619m in Q4 €1,752m in 2021

Net debt to OpEBITDA

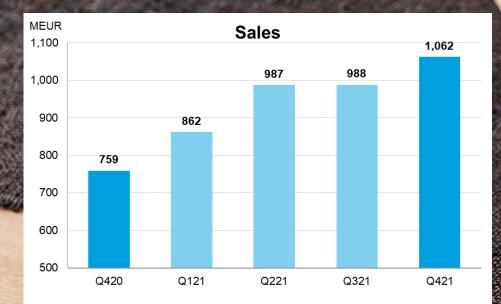
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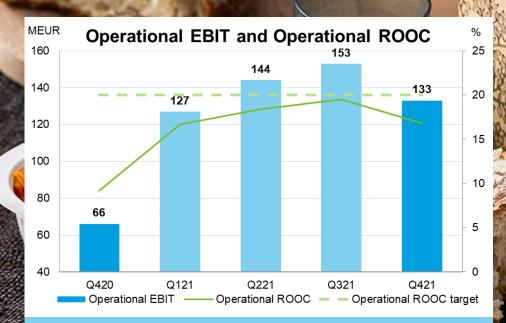
Packaging Materials

Record quarter driven by high deliveries and improved profitability in

containerboard



- Sales +40% YoY, all-time high
- Driven by clearly higher board prices including better mix and higher deliveries, supported by the containerboard ramp-up at the Oulu site



- OpEBIT +100% YoY, record high Q4
- Improved containerboard performance
- Higher sales partly offset by higher variable costs
- OpROOC 16.8% (9.2%), below long-term target of >20%

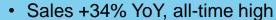


Packaging Solutions

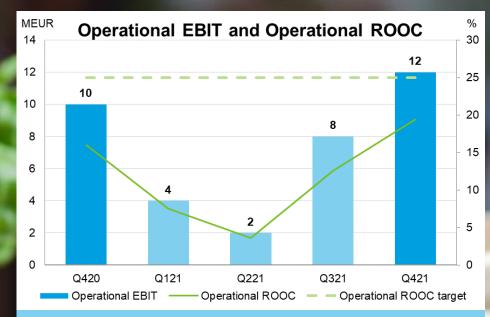
All-time high sales driven by increased prices and sales in innovation and services







- Higher prices following increased containerboard prices
- Strong growth in innovation and services

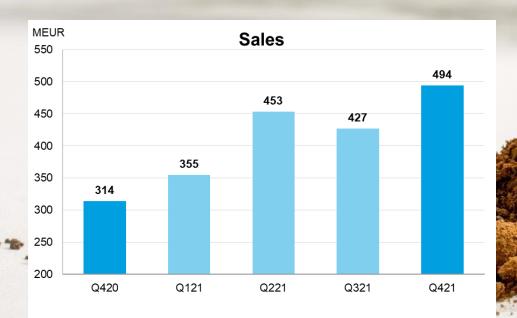


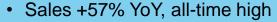
- OpEBIT +27% YoY
- Improved margins in traditional businesses
- Partly offset by increased spend in new businesses
- OpROOC 19.4%, below long-term target of >25%

Biomaterials

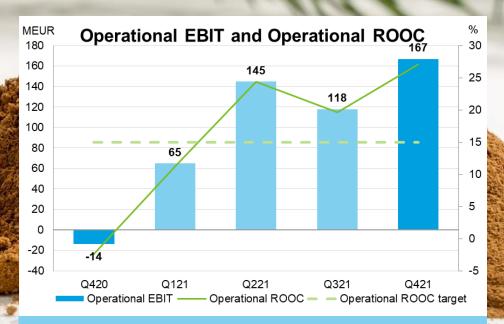
All-time high performance mainly driven by high pulp prices and volumes







- Significantly higher prices
- Record high deliveries

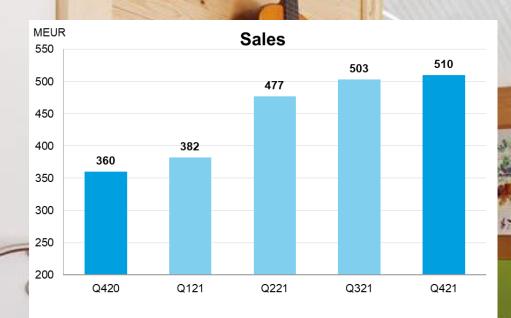


- OpEBIT +€181m YoY, all-time high
- Significantly higher sales prices and volumes as well as lower maintenance costs due to changes in maintenance schedule
- OpROOC 27.1%, above long-term target of >15%

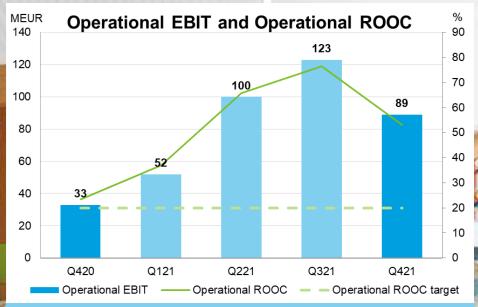
Wood Products

Record high Q4 profitability driven by high prices and a balanced product mix





- Sales +42% YoY
- Record high prices, solid demand and balanced mix
- Slightly lower classic sawn deliveries

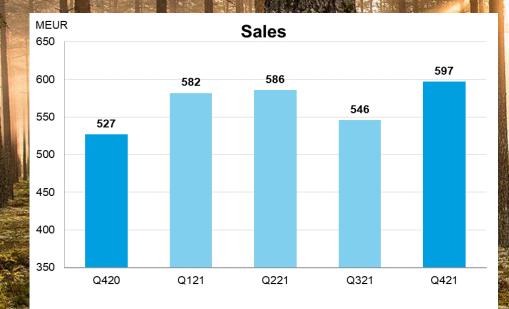


- OpEBIT +170% YoY, record high Q4
- Extraordinary high profitability continued driven by record prices. More than offset clearly higher raw material costs
- OpROOC 53.1%, clearly above long-term target of >20%

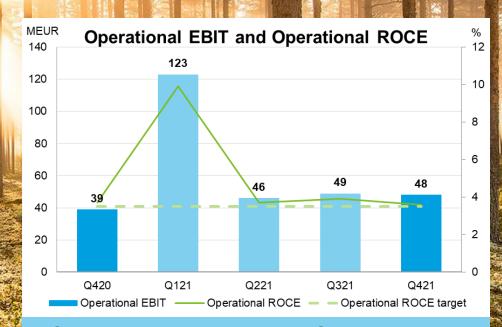


Forest Strong profitability driven by good operational performance





- Sales +13% YoY
- Driven by improved product mix and wood prices, especially for logs

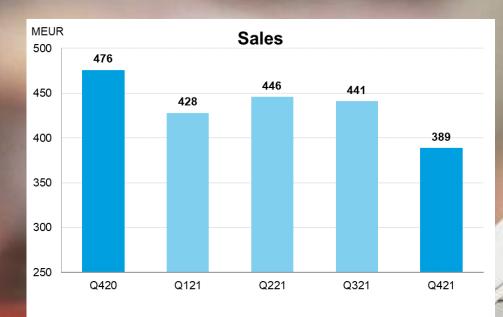


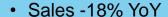
- OpEBIT +21% YoY, record high Q4
- Driven by Stora Enso's own forest assets mainly due to higher wood prices and wind power projects in Finland and Sweden
- OpROCE 3.6%, above the long-term target of >3.5%

Paper

Turnaround ongoing, cost inflation mitigated by price increases







- Driven by Veitsiluoto and Kvarnsveden site closures and Oulu site conversion
- Sales from retained business increased by 12% mainly due to increased prices



- OpEBIT -112% YoY to -10 MEUR
- Higher prices more than offset by clearly higher variable costs (PfR and energy). Structural changes decreased fixed costs and volumes
- Cash flow to sales (after investments) -2.9%, retained business 7.4%

Annual outlook and guidance

Operational EBIT in FY 2022 estimated to be approximately in line with FY 2021





Outlook

- The macroeconomic environment and the pandemic are persisting uncertainties. Demand for Stora Enso's products across all divisions is supporting sustained commercial momentum
- Measures such as pricing, flexibility in sourcing and logistics, as well as hedging are in place to manage volatility

Guidance

 Stora Enso's full year 2022 operational EBIT is estimated to be approximately in line with the full year operational EBIT for 2021 (€1,528 million)



Record high quarter driven by strong demand and strategic progress

- Record high Q4 results in most businesses
- Forest fair valuation reached €8 billion
- All-time high dividend of €0.55 per share proposed
- Positive commercial momentum into 2022
- Well positioned to capture future growth



THE RENEWABLE MATERIALS COMPANY