



UPM Biofore Beyond Fossils

Investor presentation
July 2023

UPM **BIOFORE** - BEYOND FOSSILS



This is UPM



SALES 2022
EUR 11.7 BILLION

**Wood-based
raw materials**



**Low-carbon
energy**

BUSINESSES:

UPM FIBRES
UPM ENERGY
UPM RAFLATAC
UPM SPECIALTY PAPERS
UPM COMMUNICATION PAPERS
UPM PLYWOOD
UPM BIOREFINING

55
production
plants



17,200
employees in
44 countries

RENEWABLE AND RECYCLABLE PRODUCTS FOR:



PACKAGING



LABELLING



TRANSPORTATION



ELECTRIFICATION



CONSTRUCTION



COMMUNICATION



TISSUE AND
HYGIENE PRODUCTS



MANUFACTURING



BIOPLASTICS



BIOMEDICALS

10,500
customers



170
million end-users
globally

Our businesses



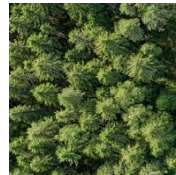
UPM Pulp

A versatile range of chemical pulp for many growing end uses



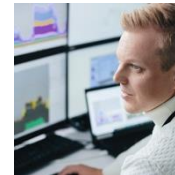
UPM Timber

Certified sawn timber for joinery, packaging, furniture, planing and construction



UPM Forest

Sourcing wood raw material for sustainable and recyclable products



UPM Energy

Zero-emission electricity generation of hydro, nuclear and thermal power



UPM Raflatrac

Self-adhesive paper and film products incl. label materials, graphics solutions and removable self-adhesive products.



UPM Specialty Papers

Labelling materials, release base papers, flexible packaging papers, office and graphic papers



UPM Communication Papers

Magazine paper, newsprint and fine papers for a wide range of end uses



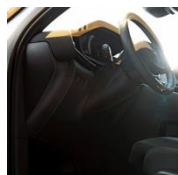
UPM Plywood

Plywood and veneer products for construction, vehicle flooring and LNG shipbuilding



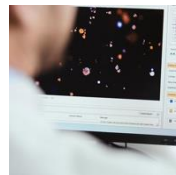
UPM Biofuels

Wood-based renewable diesel and naphtha



UPM Biochemicals

Glycols, lignin products, renewable functional fillers



UPM Biomedicals

Wood-based biomedical products for medical and life science applications



UPM Biocomposites

Composite decking materials and wood-based biocomposites

We create a future beyond fossils

Biofore strategy drives stakeholder value creation and our transformation as the frontrunner of bioeconomy



Growth

- We respond to megatrends and meet customers' changing needs
- Creating new markets and enabling sustainable choices

Performance

- Continuous improvement
- Agile operating model
- Corporate synergies

Innovation

- Creating new business and competitive advantage
- Replacing fossils with biomaterials

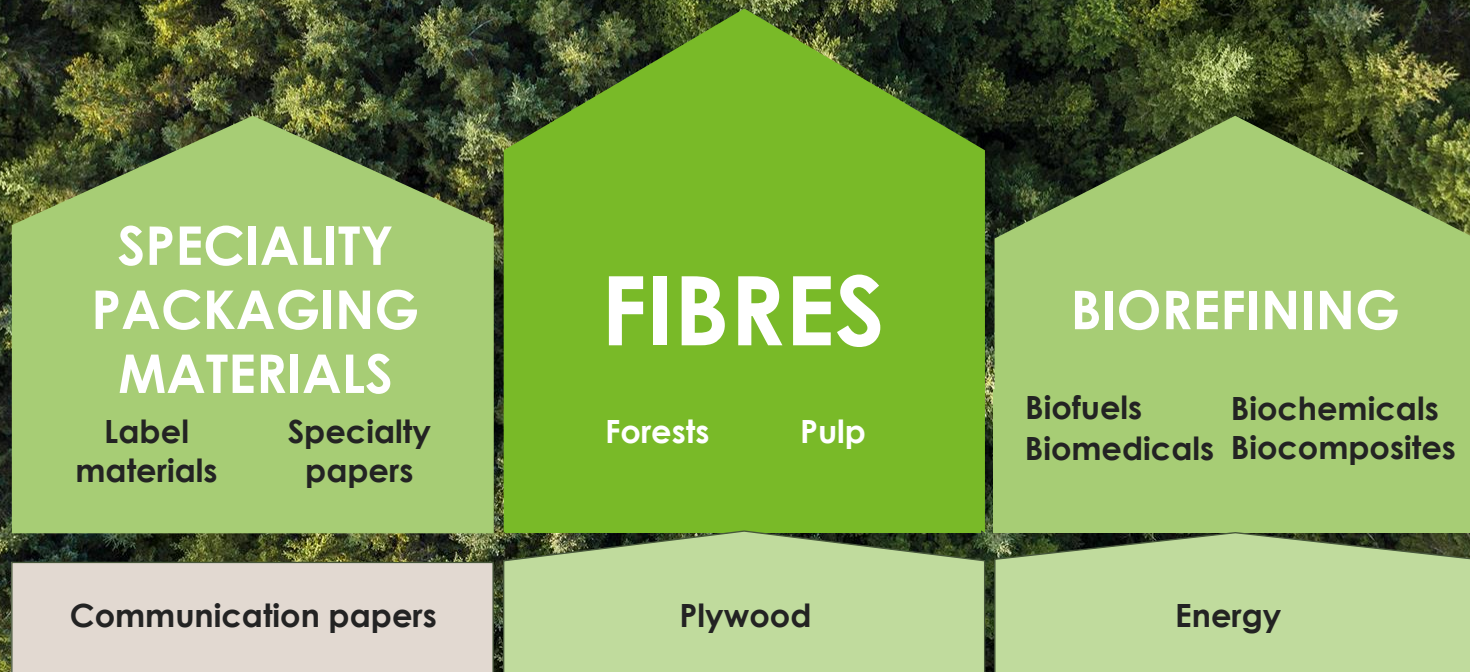
Responsibility

- Renewable & sustainable solutions
- Responsible operations and value chain

Portfolio choices

- Strategic access to sustainable renewable raw materials
- Investing in businesses with strong long-term fundamentals for growth and high barriers to entry
- Effective capital allocation with attractive returns

Long-term value creation driven by our spearheads for growth



Our climate commitment



WE ACT THROUGH FORESTS

Committed to climate-positive
forestry and enhancing
biodiversity



WE ACT THROUGH EMISSION REDUCTIONS

-65% from own CO₂ emissions
-30% from CO₂ emissions
of supply chain



WE ACT THROUGH PRODUCTS

Innovative products
Scientifically verifying the climate
impact of all our products



BUSINESS AMBITION FOR 1.5°C   **OUR ONLY FUTURE**

**THE Paris...
CLIMATE 10 years
PLEDGE Early**

Towards net-zero emissions (UPM 2022)



WE ACT THROUGH FORESTS

-2,3

MtCO₂eq

Carbon sink

Trees and soil

**Long-term
carbon storage**

Trees and soil

WE ACT THROUGH EMISSION REDUCTIONS

+4,5

MtCO₂

**Own
emissions**

Scope 1 ja 2

+5,0

MtCO₂

**Value chain
emissions**

Scope 3

WE ACT THROUGH PRODUCTS

-2,0

MtCO₂

**Fossil
energy
substitution**

+1,6

MtCO₂

**Temporary
carbon storage**

Wood-based
products

-5,8

MtCO₂

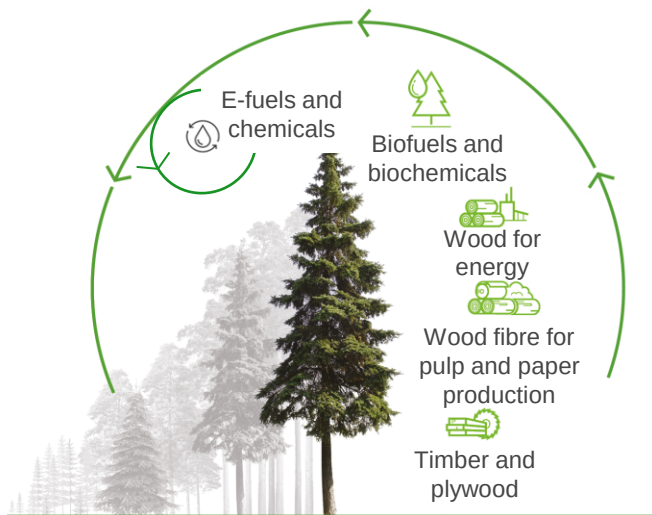
**Fossil-based
products
substitution**

BIO

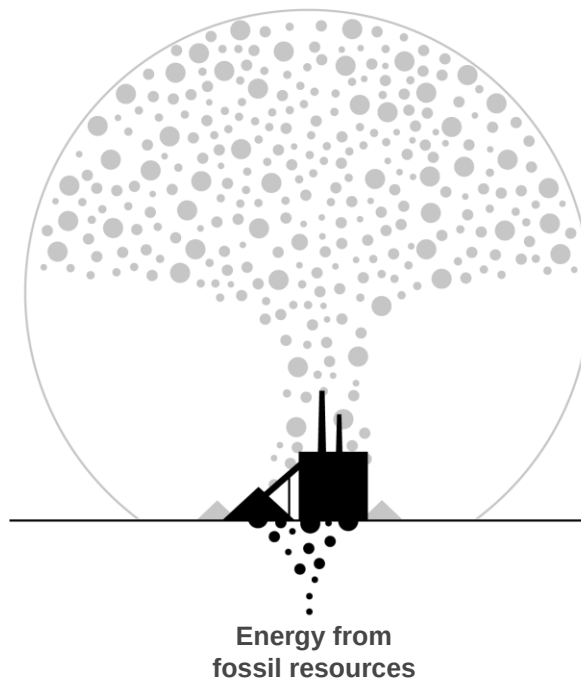
Bioeconomy offers a sustainable alternative to fossil-based economy



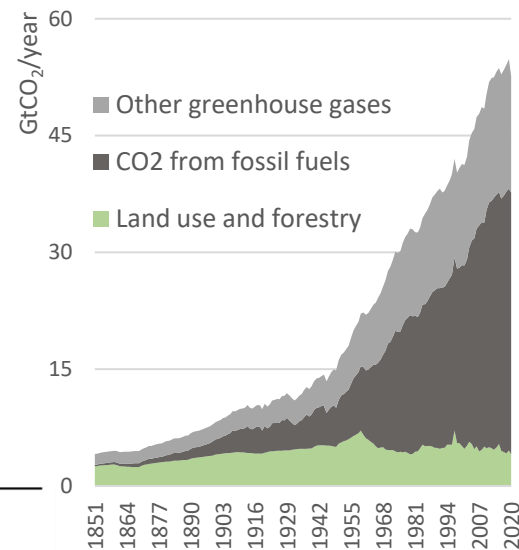
Biomass use is not increasing
CO₂ to carbon cycle



Use of fossil resources
increases CO₂ amount



Use of fossils has increased
global CO₂-emissions



Source: IEA, Our World in Data

Leader in responsibility

Member of
**Dow Jones
Sustainability Indices**
Powered by the S&P Global CSA

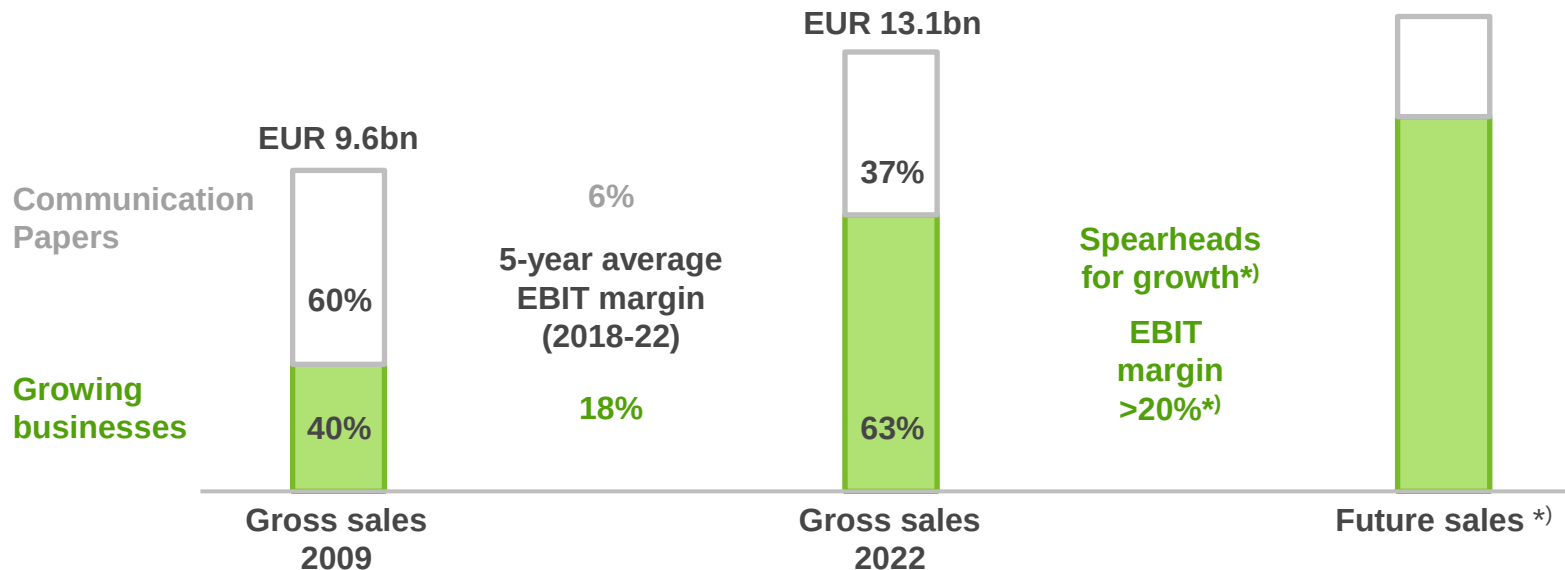
MSCI
ESG RATINGS

AAA

CCC B BB BBB A AA **AAA**



Transformation in growth phase – business mix drives earnings and shareholder value

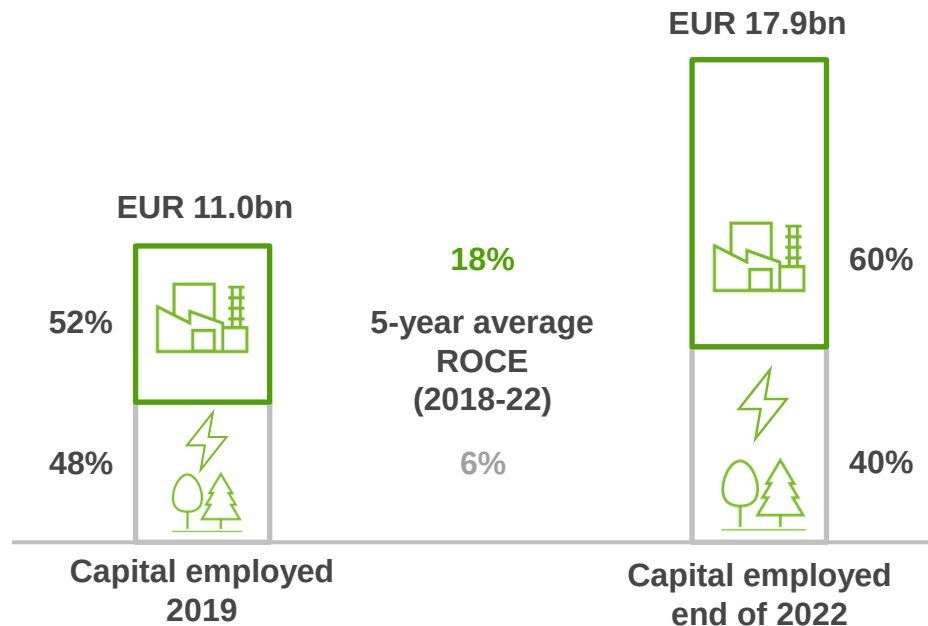


Growth investments have increased capital employed, significant earnings potential as they start to contribute

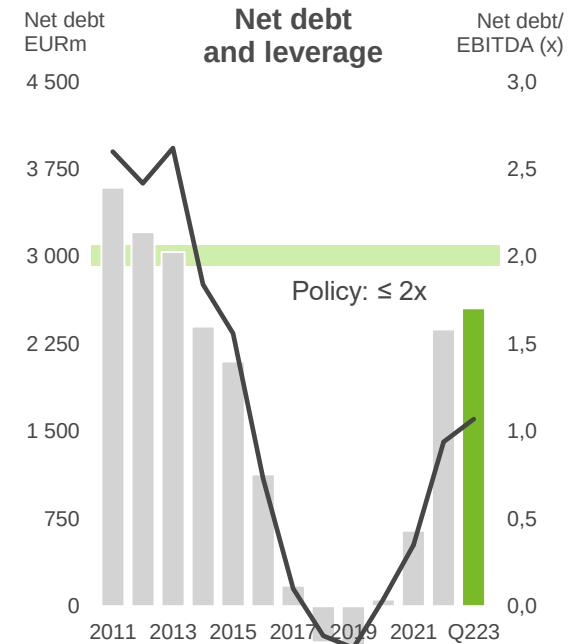
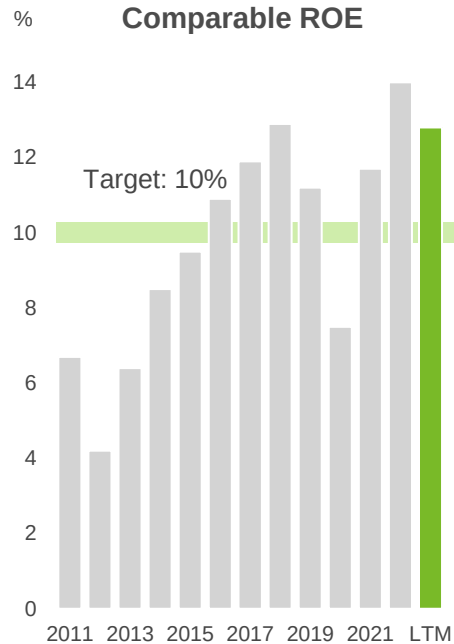


Industrial operations:
Further growth,
attractive return targets

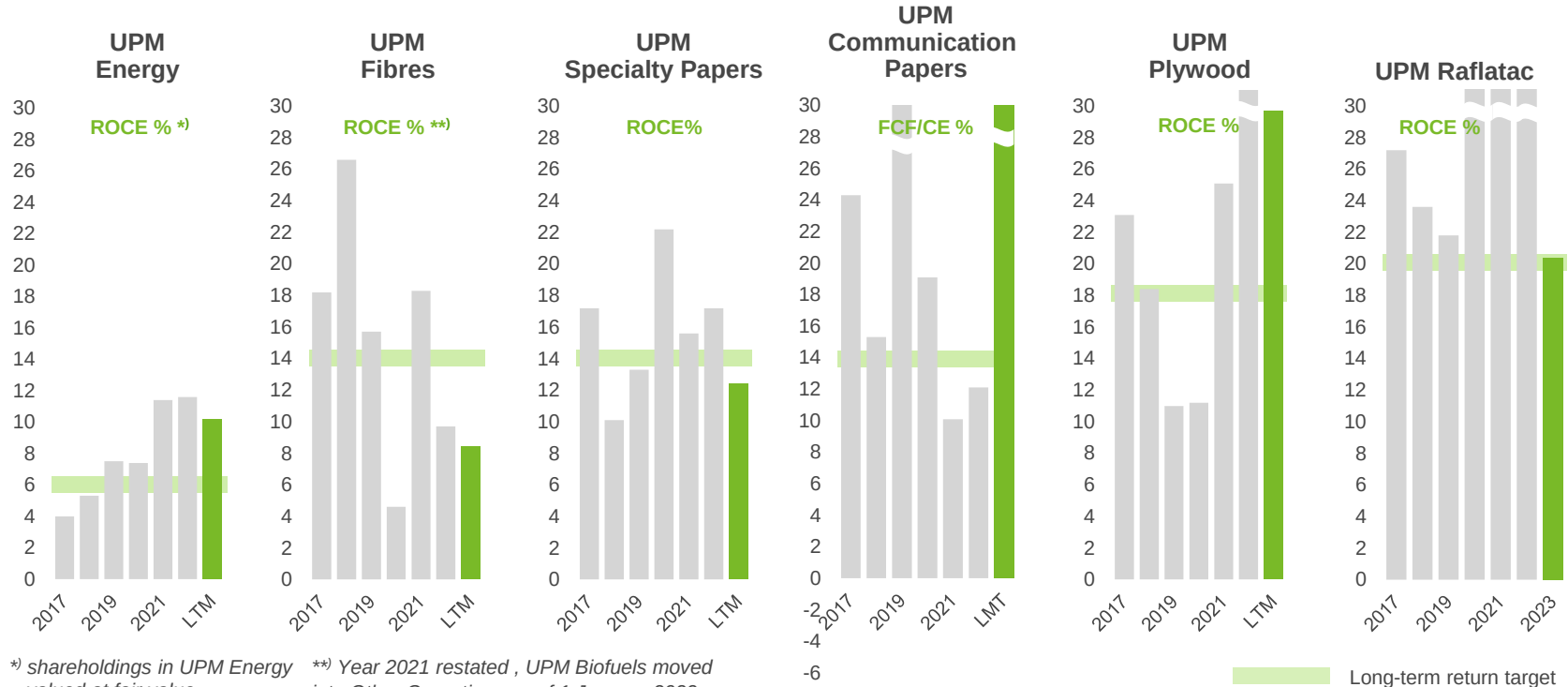
Forest and energy assets:
Sustainable value creation



Group financial targets



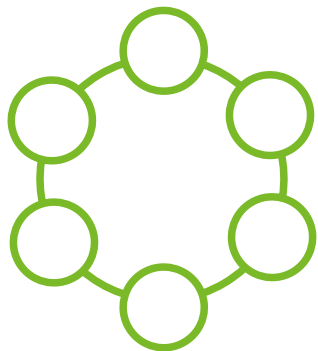
Business area long-term return targets



5-year capital allocation for 2018-2022



Performance focus
Strong operating cash flow



Attractive dividend
EUR 3.4bn

**High return
investments**
EUR 4.6bn

**Strong
balance sheet**
Net debt increase EUR 2.2bn

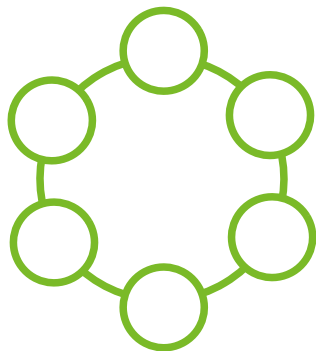
**Net debt/
EBITDA
< 2x**

Net debt / EBITDA
0.94x
at the end of 2022

Illustrative capital allocation*) for the next 5 years (2023-2027)



Performance focus
Strong operating cash flow



Attractive dividend
EUR ~4–4.5bn

High return
investments
EUR ~3.5–4.5bn

Strong
balance sheet

Net debt/
EBITDA
< 2x

Maintain headroom

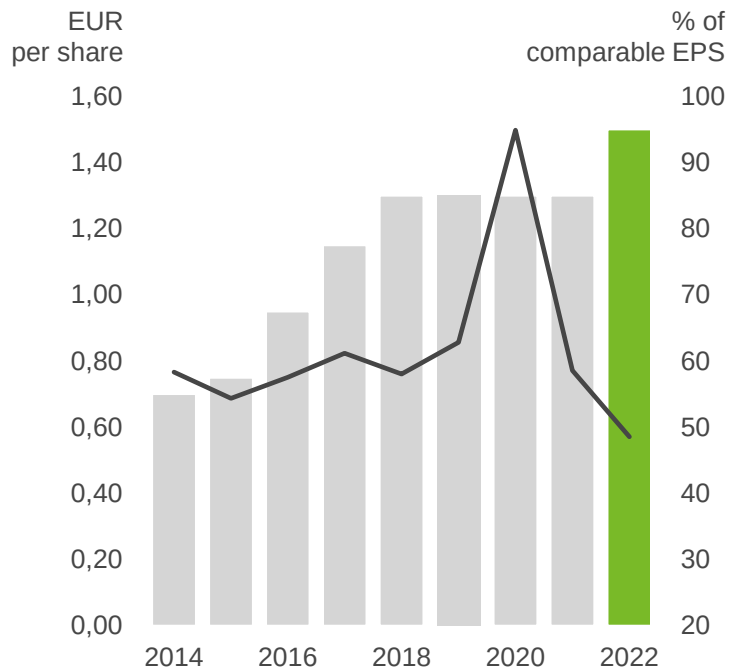
*) This is not a forecast

Dividend policy and capital allocation



- UPM aims to pay attractive dividends, targeting at least half of the comparable earnings per share over time.
- UPM plans to allocate capital to
 - *Invest to grow the company and its earnings.* UPM targets growth in comparable EBIT and comparable return on equity exceeding 10%.
 - *Pay attractive dividend.* The targeted earnings growth drives dividend growth over time.
 - *Maintain a strong balance sheet.* Net debt to EBITDA ratio to be less than 2.
 - *Share buybacks.* They are a complementing tool that may be used relative to investment opportunities and company valuation.

Dividend: 15% increase to EUR 1.50 per share



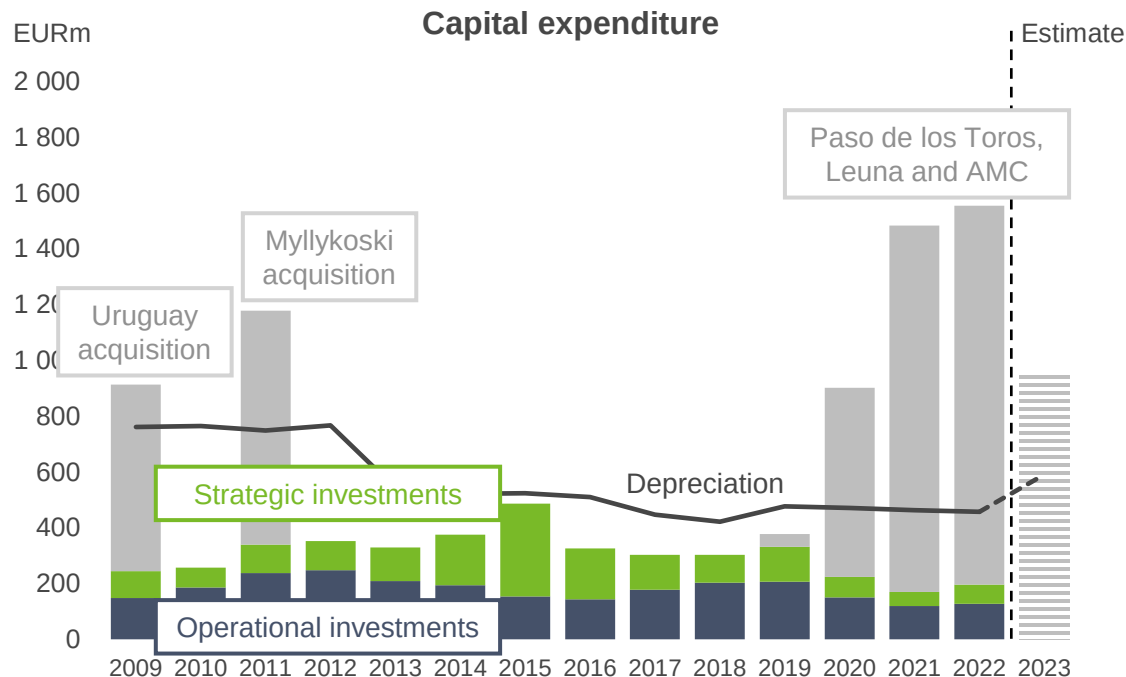
Dividend policy

- UPM aims to pay attractive dividends, targeting at least half of the comparable earnings per share over time

Dividend for 2022

- EUR 1.50 (1.30) per share, totalling EUR 800m
- 49% of 2022 comparable EPS

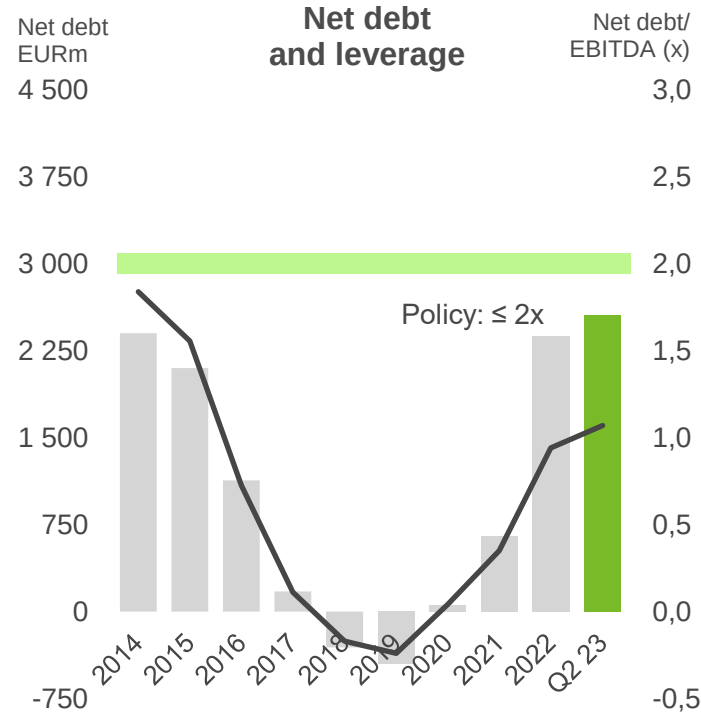
Transformative growth projects in the most intensive phase in 2021-2022



Capex estimate for 2023

- Total EUR 950m
- Includes EUR 750m on the transformative growth projects, pulp in Uruguay and biochemicals in Germany
- Operational investment needs consistently low

Strong financial position

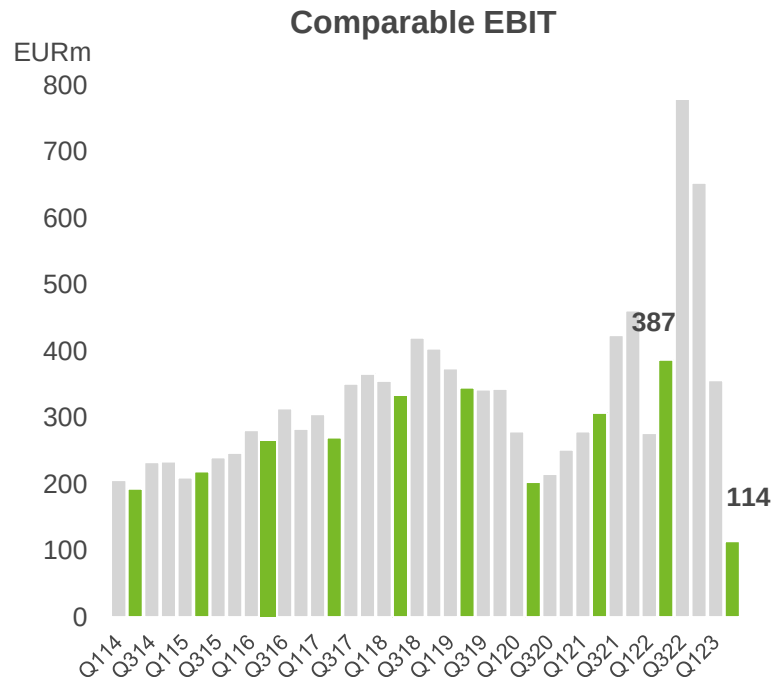


- Net debt EUR 2,557m at the end of Q2 2023
- Net debt / EBITDA 1.07
- Cash funds and committed credit facilities EUR 6.4bn at the end of Q2 2023
- No financial covenants

Q2 2023: Strong downturn in markets pushed Q2 results to exceptional lows – transformation continues



- Sales were EUR 2,558m (2,562m in Q2 2022)
- Comparable EBIT decreased by 71% to EUR 114m, 4.5% of sales (387m, 15.1%)
- Delivery volumes impacted by destocking in various product value chains
- Pulp and energy prices decreased to cyclical bottom levels
- Operating cash flow was EUR 459m (-879m), supported by cash inflow from energy hedges
- UPM Paso de los Toros pulp mill in Uruguay ramping up production according to the plan
- The OL3 nuclear power plant unit began regular commercial electricity production

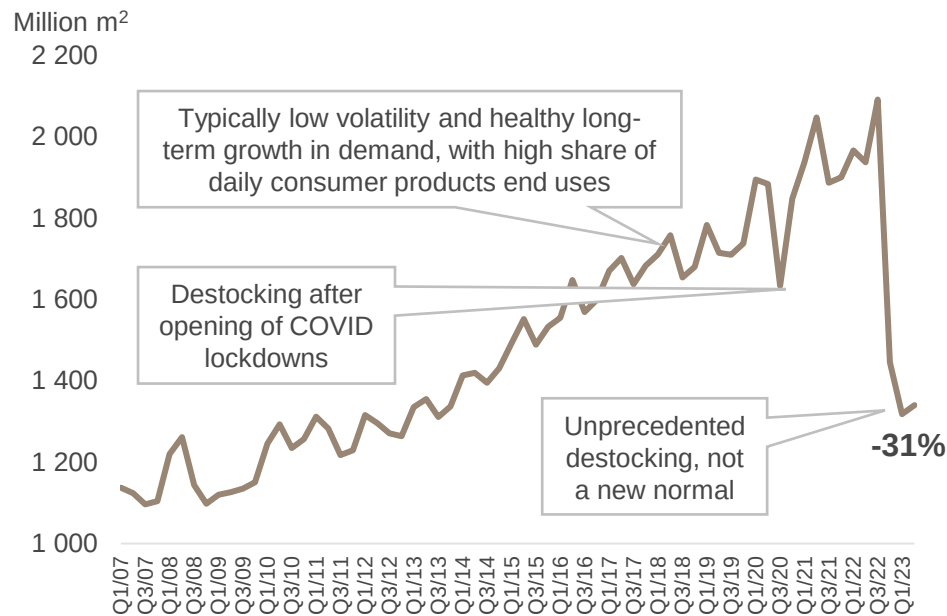


Focus on margin management during exceptionally low volumes



- H1 market shipments in most products well below end-use demand and long-term trends due to destocking
- Consumers impacted by inflation, interest rates and uncertainty, affecting underlying end use-demand
- The impact of destocking is expected to gradually phase out during H2 2023
- The long-term growth prospects remain intact and attractive
- Variable costs are expected to decrease in H2 2023 compared to H1 2023.

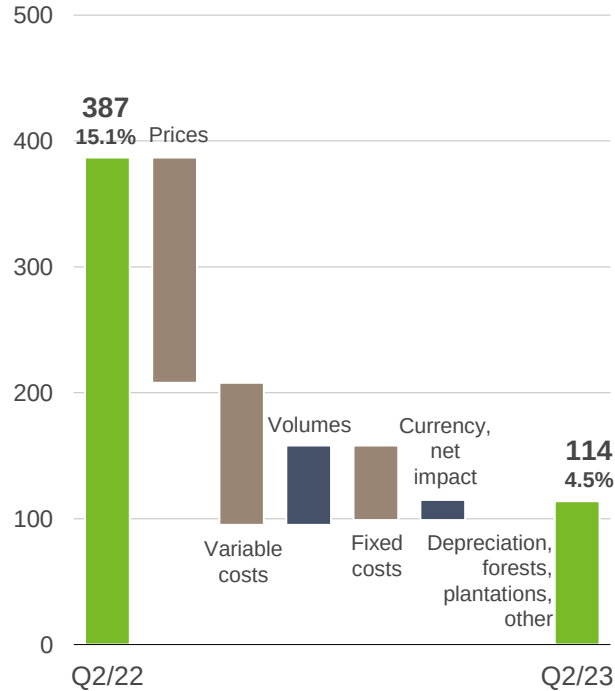
Example: market shipments of self-adhesive label materials in Europe impacted by destocking



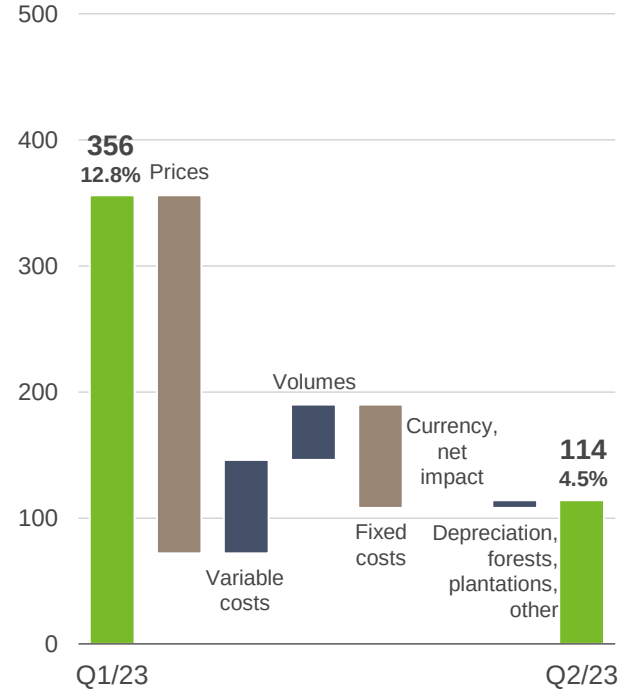
Source: FINAT

Comparable EBIT in Q2 2023

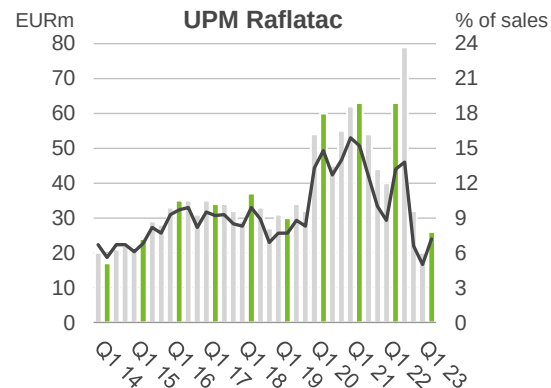
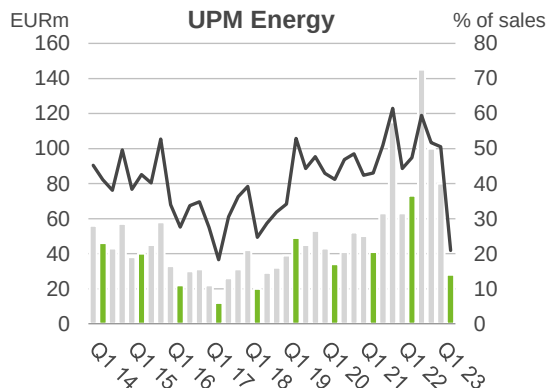
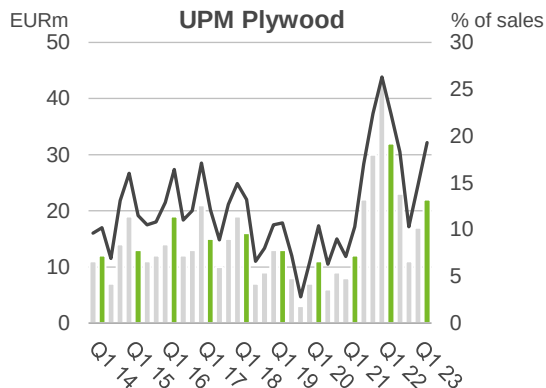
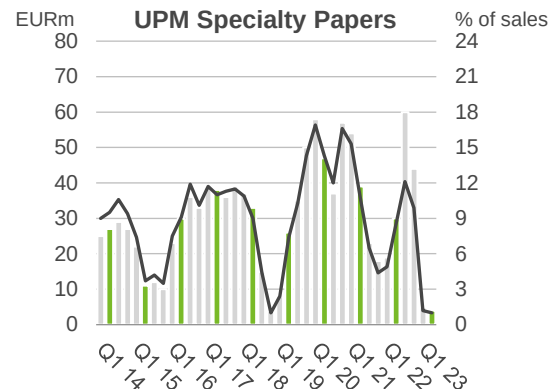
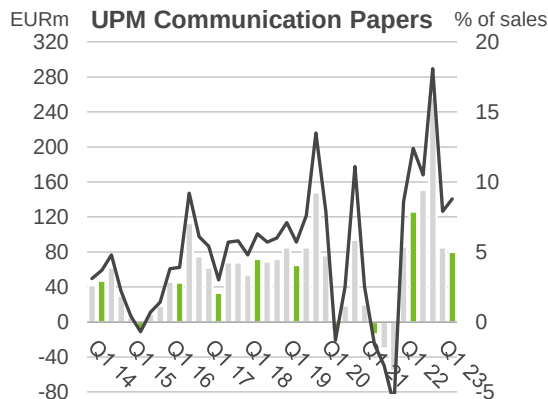
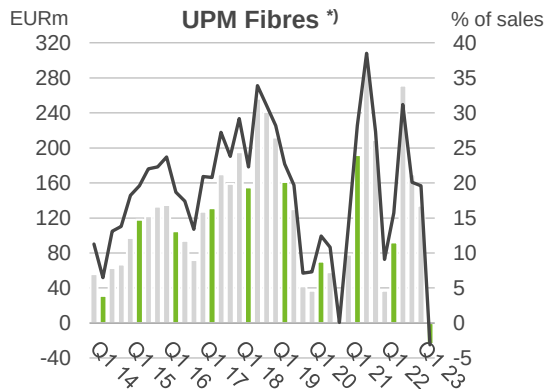
EURm



EURm



Comparable EBIT by business area



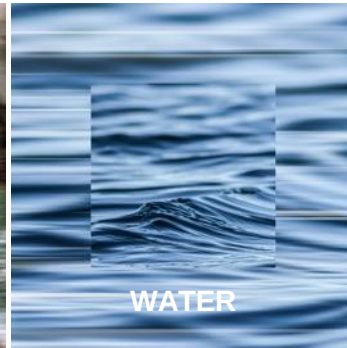
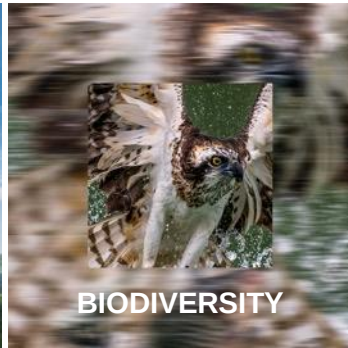
Outlook for 2023



- Full-year 2023 comparable EBIT is expected to decrease from 2022. UPM's comparable EBIT in H2 2023 is expected to be on similar level or increase compared to H1 2023.
- UPM's delivery volumes are expected to increase in H2 2023 from H1 2023. Deliveries were unusually low during H1 2023, held back by significant destocking in the various product value chains. Destocking is expected to gradually phase out during H2 2023, enabling UPM's deliveries to recover towards the underlying end-use demand. The production ramp-up of the UPM Paso de los Toros pulp mill and the OL3 nuclear power plant unit will add to UPM's deliveries in H2 2023.
- Chemical pulp and electricity market prices were historically high during H2 2022 and declined rapidly to estimated bottom-of-the-cycle levels during H1 2023. H2 2023 starts with low pulp and electricity prices, impacting these commodity price-driven businesses. In the other businesses UPM continues to manage margins.
- Variable costs are expected to decrease in H2 2023 compared to H1 2023. In addition, UPM is implementing measures to reduce fixed and variable costs.

FOREST **ACTION**

The **UPM Forest Action** programme takes a holistic view,
covering the five fundamentals of responsible forestry:

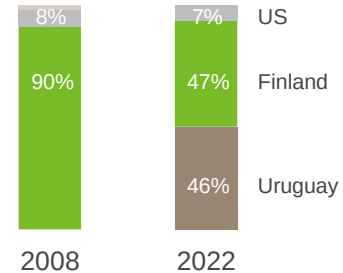


Developing our forest assets

UPM forests and plantations

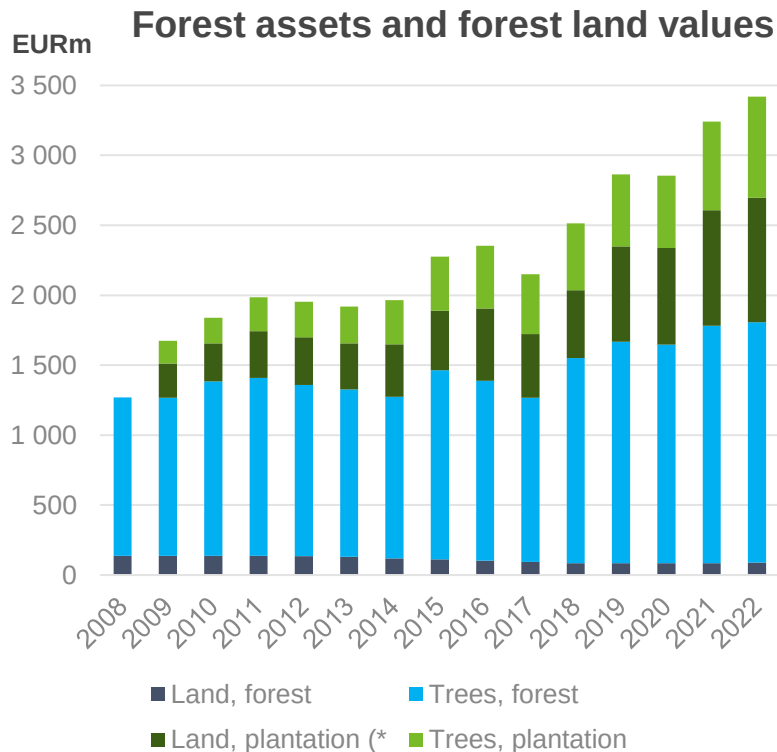
	2008	2022
Forest and plantation land (own and leased) (1,000 ha)	1,012	1,070
Forest growth (million m ³)	4.3	6.7
Wood sourced from UPM forests and plantations (million m ³)	2.2	4.5
Value of forests and plantations, including land (EURm)	1,270	3,421

Area distribution



Climate-positive forestry and maintenance of carbon sinks
Investing in strategic forest assets in Uruguay
Productivity with active management and nurseries
Enhancing biodiversity

Active forest strategy – UPM's forest assets are increasingly productive and valuable



Uruguay plantations

“fast turnover, low inventory”

- Value EUR 1.6bn
- Continuous productivity improvement (pulp tonnes/ha)
- Investing in strategic forest assets

Finland and other northern forests

“slow turnover, high inventory”

- Value EUR 1.8bn (+43% since 2008, EUR/ha +140% since 2008)
- Decreased area (-42% since 2008), focusing on forests close to mills
- Improved growth (m³/ha)
- Trend price (EUR/m³)

New business in wood-based biochemicals

Responding to strongly growing demand for sustainable solutions



Industrial scale biorefinery in Leuna, Germany



Alternatives to fossil materials in various consumer-driven end-uses



EUR 1 180 million investment
Total annual capacity of 220,000 tonnes

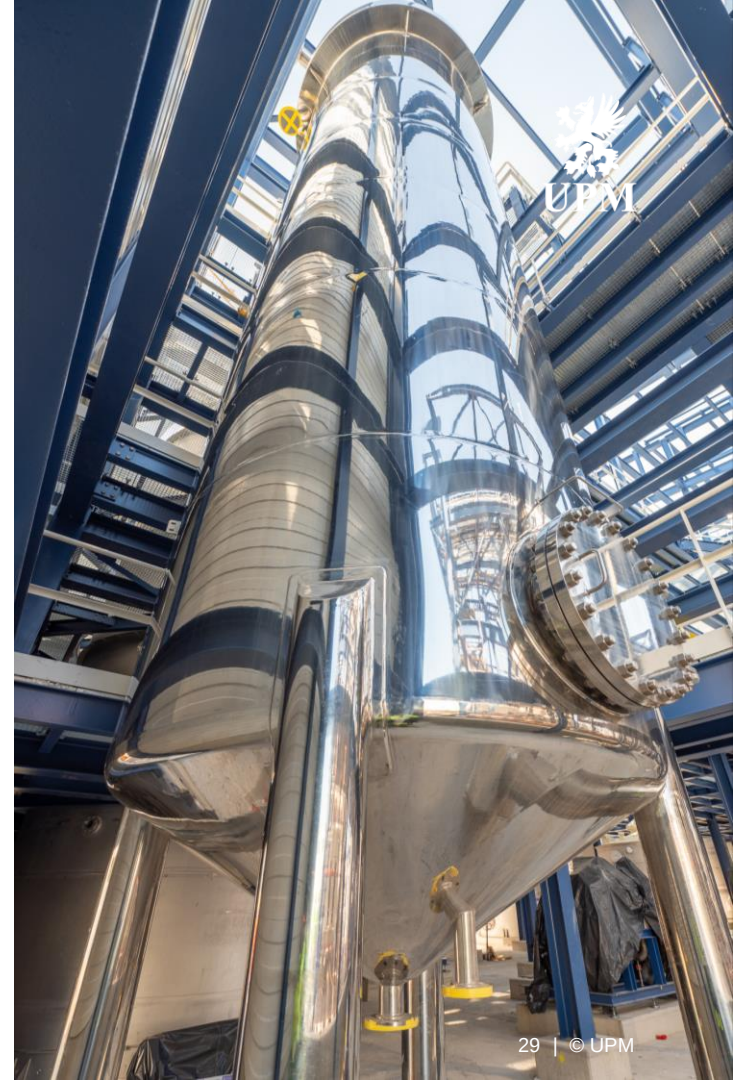


Scheduled to start up by the end of 2024



UPM Leuna biochemicals refinery project schedule and capex updated

- Operating permit obtained in May
- The civil construction on the site will be completed in Q3 2023
- The commissioning will be implemented in phases starting in Q4 2023
- Start-up expected by the end of 2024
- Investment estimate is EUR 1,180 million
- We have full confidence in profitable biochemicals business, and the technologies used in UPM Leuna
- Interest for our renewable products replacing fossil materials has proven to be high



Renewable product range



- **Bio-monoethylene glycol (bMEG)**
for textiles, PET bottles, packaging, deicing fluids
- **Renewable functional fillers**
for rubber applications as a sustainable, light-weight and high-purity alternative to carbon black and silica
- **Bio-monopropylene glycol (bMPG)**
for composites, pharma, cosmetics, detergents
- **Industrial sugars**
for various applications in chemicals industry



Large growth markets – unique sustainability value



- The global glycols market is more than 30 million tonnes, with expected annual growth of approx. 4%
- The global market of carbon black and silica is more than 15 million tonnes, with expected annual growth of approx. 3%
- Current market supply based on non-renewable raw materials
- Customers increasingly committed to sustainable solutions
- UPM's renewable raw material and new technologies provide significant reduction in carbon footprint
- UPM biochemicals fit directly into customers' processes and the existing recycling infrastructure

UPM Paso de los Toros will grow UPM Pulp by over 50%

Highly competitive cash cost of
USD 280 per delivered tonne of pulp



Pulp mill and deep seaport
terminal in Montevideo
Jobs and other opportunities
for the residents of the region



Pulp is used in tissue,
specialty and packaging
papers, for example



USD 3.47 billion investment
Total annual capacity
of 2.1 million tonnes of
eucalyptus pulp



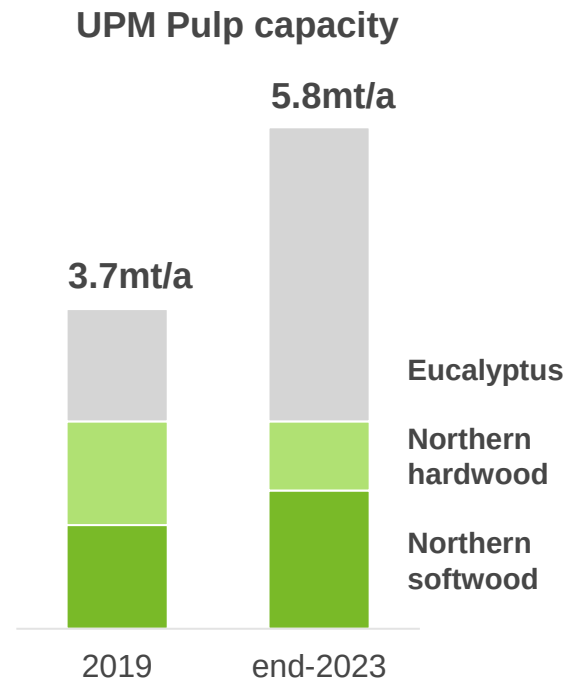
Started up in April



Transformative step in UPM's pulp business and in UPM's future earnings



- Significant step for UPM's future earnings
 - One of the most competitive mills in the world
 - Expected cash cost level of USD 280 per delivered tonne of pulp*)
 - Attractive returns in various market scenarios
 - Carefully prepared to ensure long-term competitiveness and to minimise risks both in the project phase and during continuous operations
- Step change in UPM's pulp business



Competitive wood supply



Eucalyptus availability secured through UPM's own and leased plantations and wood sourcing agreements with private partners

UPM's own, leased and managed plantations in Uruguay cover 504,773 hectares, supplying both UPM Fray Bentos and the new Paso de los Toros mill

30 years experience of sustainably managed and productive plantations

Status: Expansion ready



Efficient logistics set-up



USD 280 million investment to a **deep sea pulp terminal** in Montevideo port

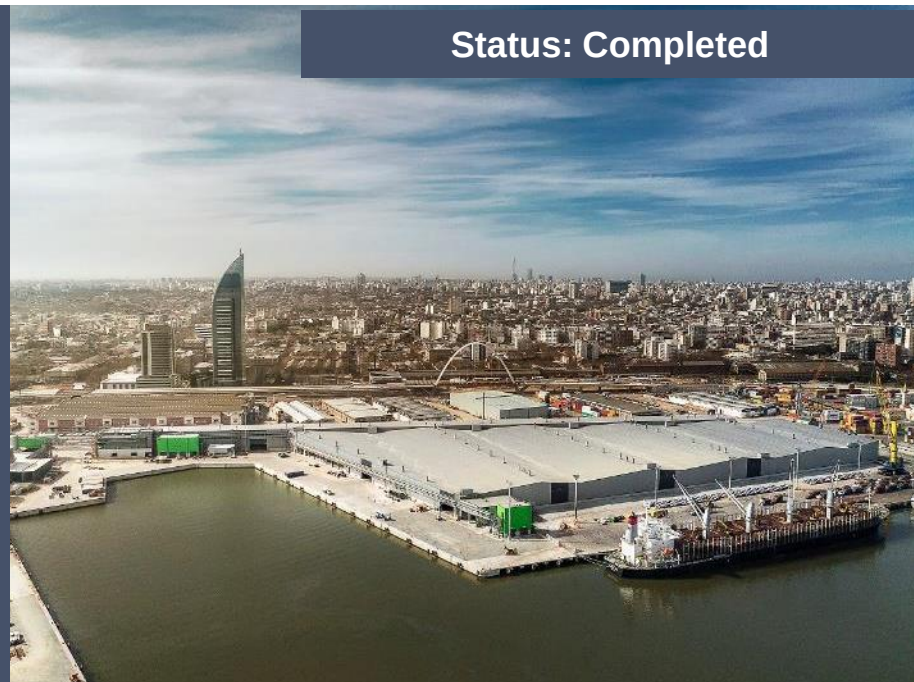
- Direct rail access from the mill with 4-6 trains/day + 1 chemical train/day to the mill
 - Operating 24/7
 - >50,000 m warehouse for ~2 million pulp tonnes
 - Deep sea port with 100 pulp ships a year
- ➔ **Direct, efficient access to global markets**

Railway modernisation

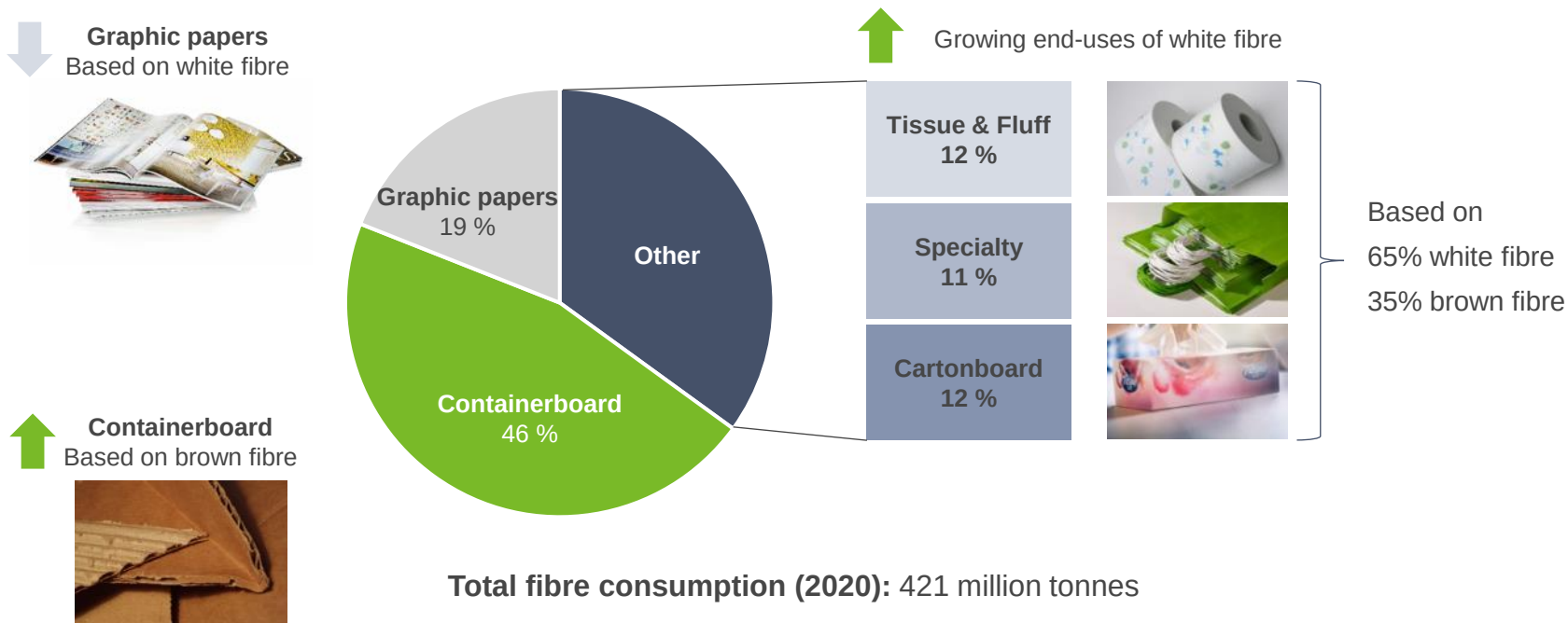
- Public-private-partnership agreement by the government and the construction company

Road improvements

Status: Completed



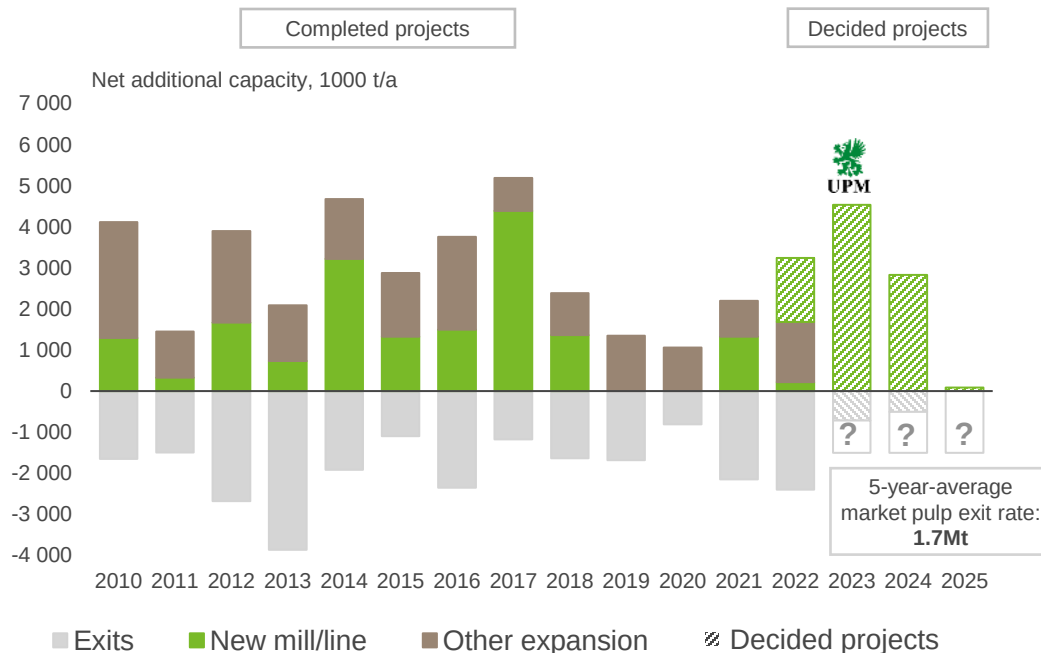
Market pulp consumed in growing end-uses – alternative white fibre demand overcoming graphical paper decline



Moderate numbers of decided projects in the short-term and expansion mainly in BHKP



Entry of bleached market pulp capacity



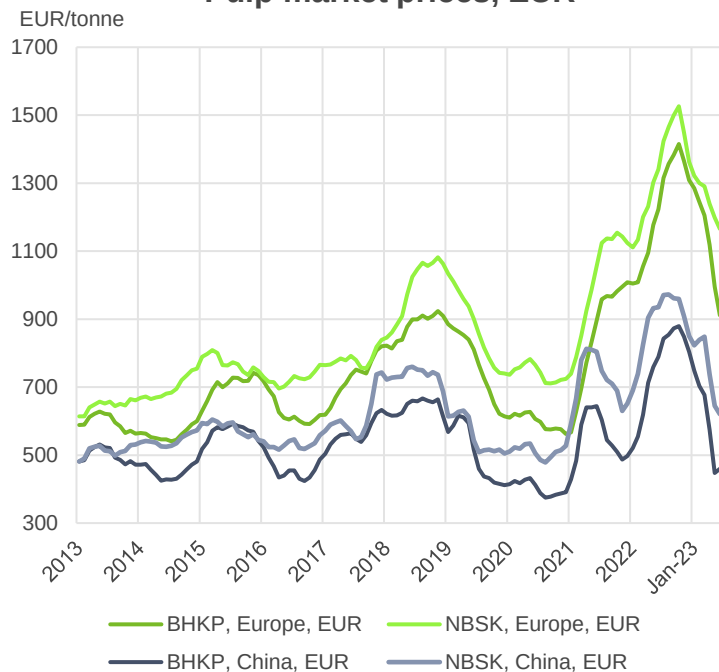
Note: including BHKP, BSKP, excluding fluff and dissolving

UPM Fibres

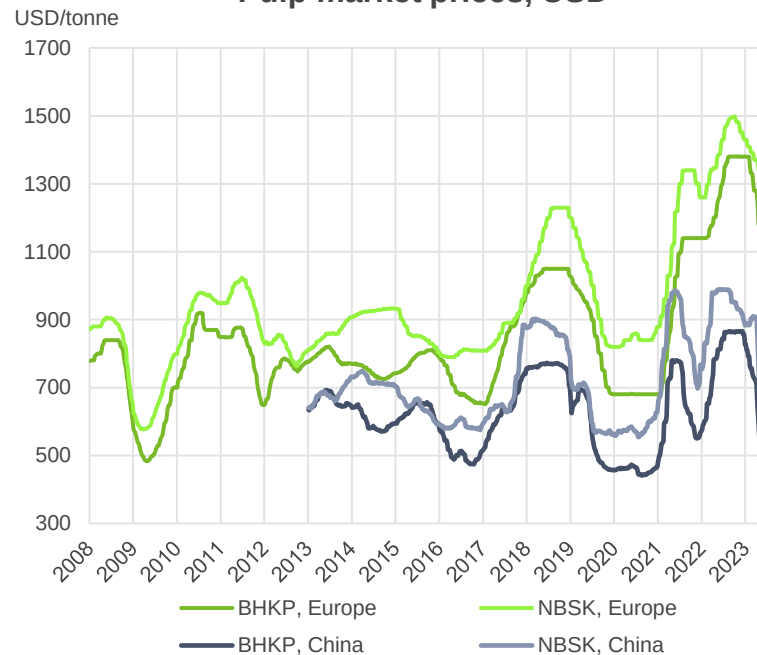
Chemical pulp market prices



Pulp market prices, EUR



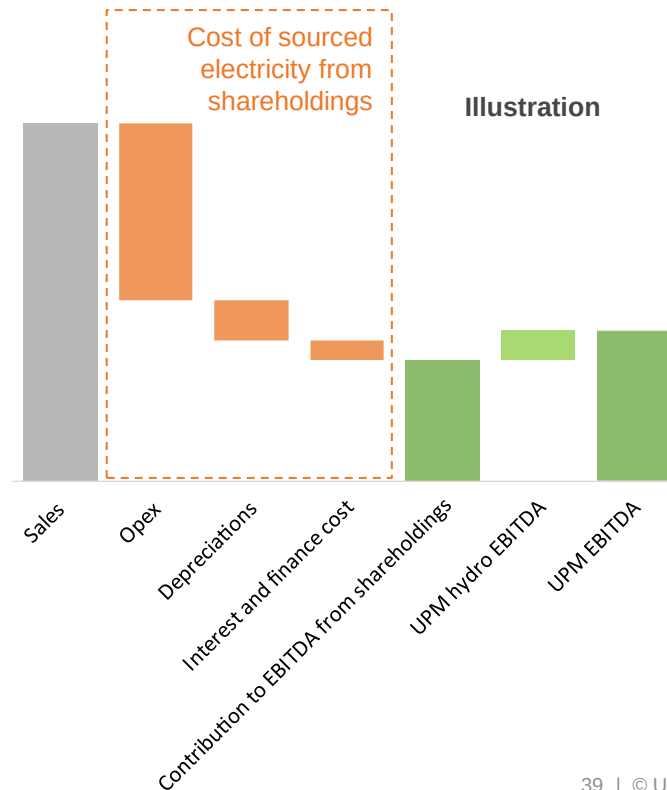
Pulp market prices, USD



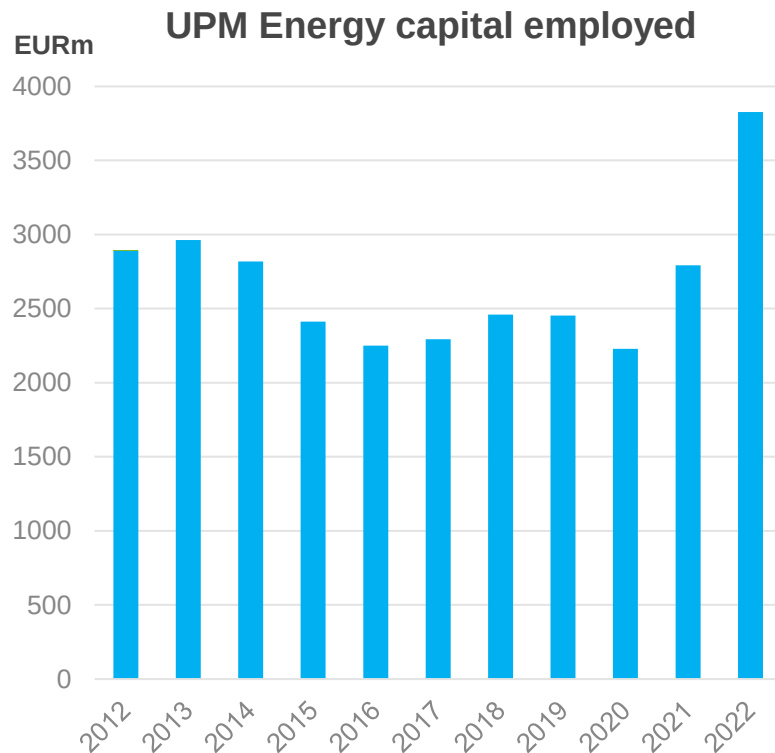
Source: FOEX Indexes Ltd

UPM Energy's power generation	MW	EURm
Hydropower holdings	552	1,014
Nuclear power OL1 and OL2	588	1,666
Nuclear power OL3 (PTO 03/2023)	494	312
Thermal power	133	1
UPM Energy's shareholdings in total, valued at fair value	1,765	2,993
UPM own hydropower assets	170	
UPM Energy's in total (incl. OL3)	1,936	
UPM Energy capital employed		3,291

UPM Energy sources electricity from part owned energy companies at full cost (cost-price principle, mankala principle)



UPM Energy's assets are competitive, CO₂-free and increasingly valuable



Hydropower

- Flexible generation, crucial to balance the volatile system
- Renewable, CO₂-free
- Value EUR 1.3bn

Nuclear power

- Reliable baseload generation
- CO₂-free
- Unique and safe solution for final disposal of spent fuel
- Value EUR 2.5bn

OL3 in regular commercial electricity production

We create a future beyond fossils: OL3 grows UPM Energy's carbon free electricity generation by nearly 50%

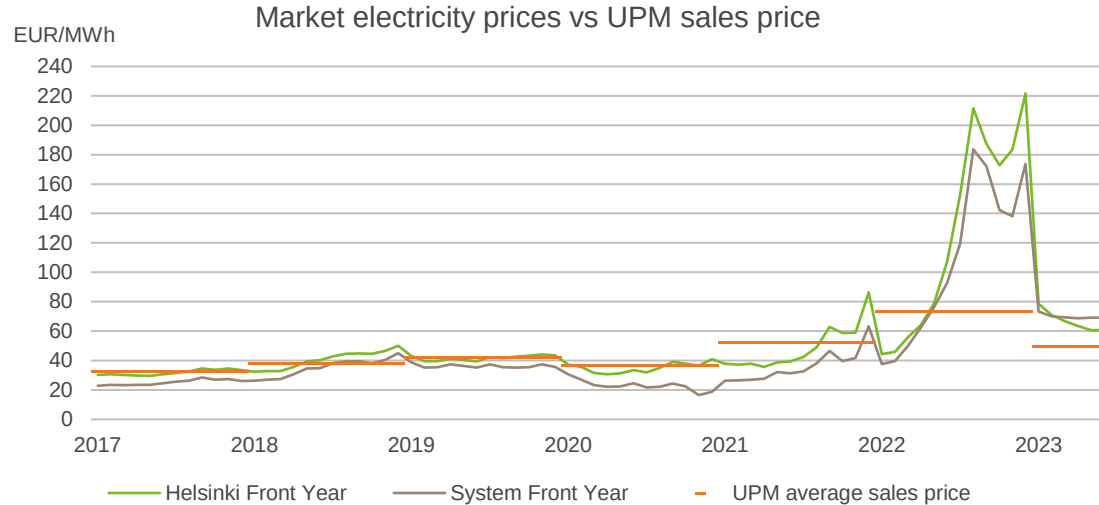
Reliable CO₂-free baseload energy to support the electrification of the society

Finland's electricity self-sufficiency significantly improved, carbon neutral generation to about 90%

UPM's agile and competitive energy business platform opens growth opportunities in the green transition



Cost efficient generation enables robust profitability in changing market environment



UPM Energy profitability	2018	2019	2020	2021	2022	H123
Comparable EBIT, EURm	123	185	171	270	381	108
% of sales	31.5	44.4	45.0	51.3	52.0	37.0

Self adhesive labels in various end-uses



Food



Wine, spirits & beverage



Pharmaceuticals



Personal care



Home care



Durables



Transport & logistics



Industrial
Chemical



Retail



A4 & cut-size



Security & brand
protection



Tyre

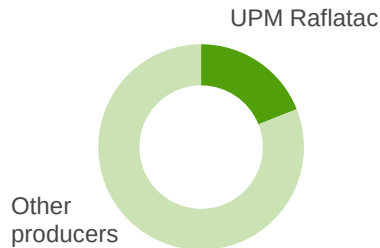
UPM Raflatac

The self-adhesive labelstock market

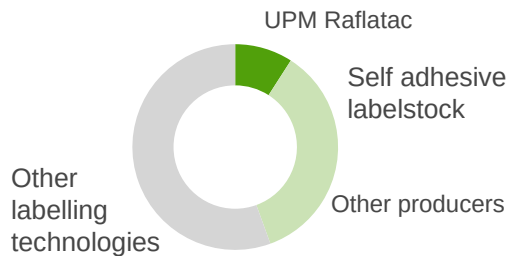
- >EUR 10bn global market
- ~3-4% p.a. growth
- Private consumption driven
- Largest of the labelling technologies
- <25% of total self adhesive materials markets



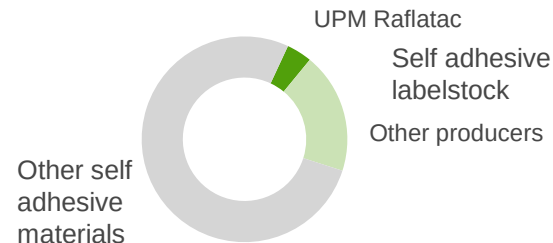
Self-adhesive labelstock market



All labelling technologies



All self adhesive materials



The labelstock markets have solid long term demand growth trends – short term can be more volatile



The long term demand growth outlook remains a solid 3-4% p.a.

However in the short term the demand changes can be more dynamic

The demand of UPM Raflatac's end use portfolio is relatively resilient

Growth drivers



Packaging unit growth in Food, Personal Care, Beverage



E-Commerce growth & parcel logistics



Niche segments (e.g. pharmaceuticals)



Further trends benefitting labelstock: **sustainability**, wet glue substitution

Impact to labelstock demand



Consumer **stockpiling**



Lockdowns

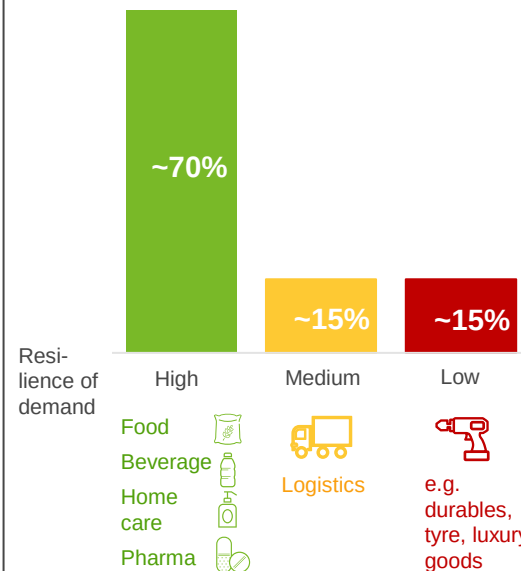


Value chain **inventory cycle**



Private consumption changes

Indicative share of UPM Raflatac business (%)



UPM Specialty Papers

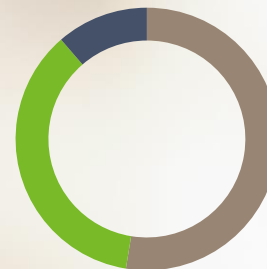


Sales
1,677 M€
in 2022

EBITDA
230 M€
in 2022

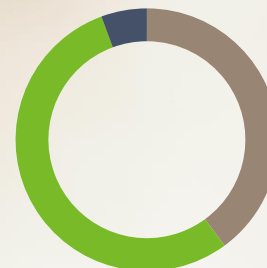
ROCE
17.2%
in 2022

Sales by market*



■ APAC ■ EMEIA ■ North America & LATAM

Sales by product*



■ Fine ■ Label & release ■ Packaging

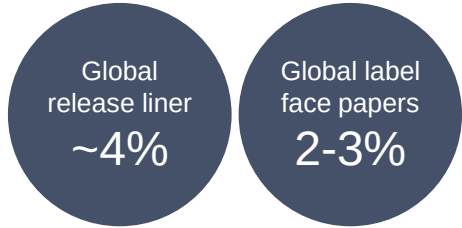
*2021 figures

Growth expected to continue in main markets



LABEL & RELEASE

Market development forecast,
CAGR 2021-2026

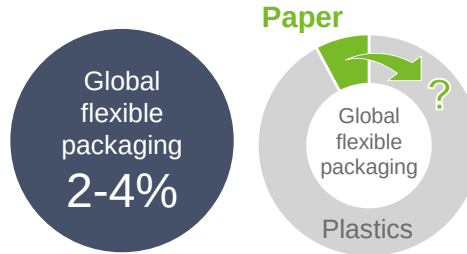


UPM Specialty Paper

Leading position in growing global label and release paper markets



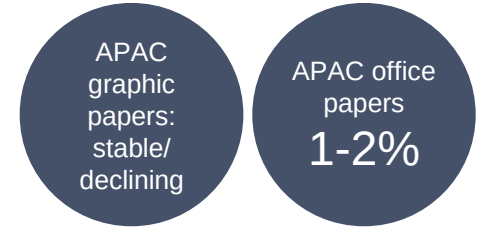
PACKAGING PAPERS



Selective approach in consumer packaging area. Well positioned for future growth.



APAC FINE PAPERS



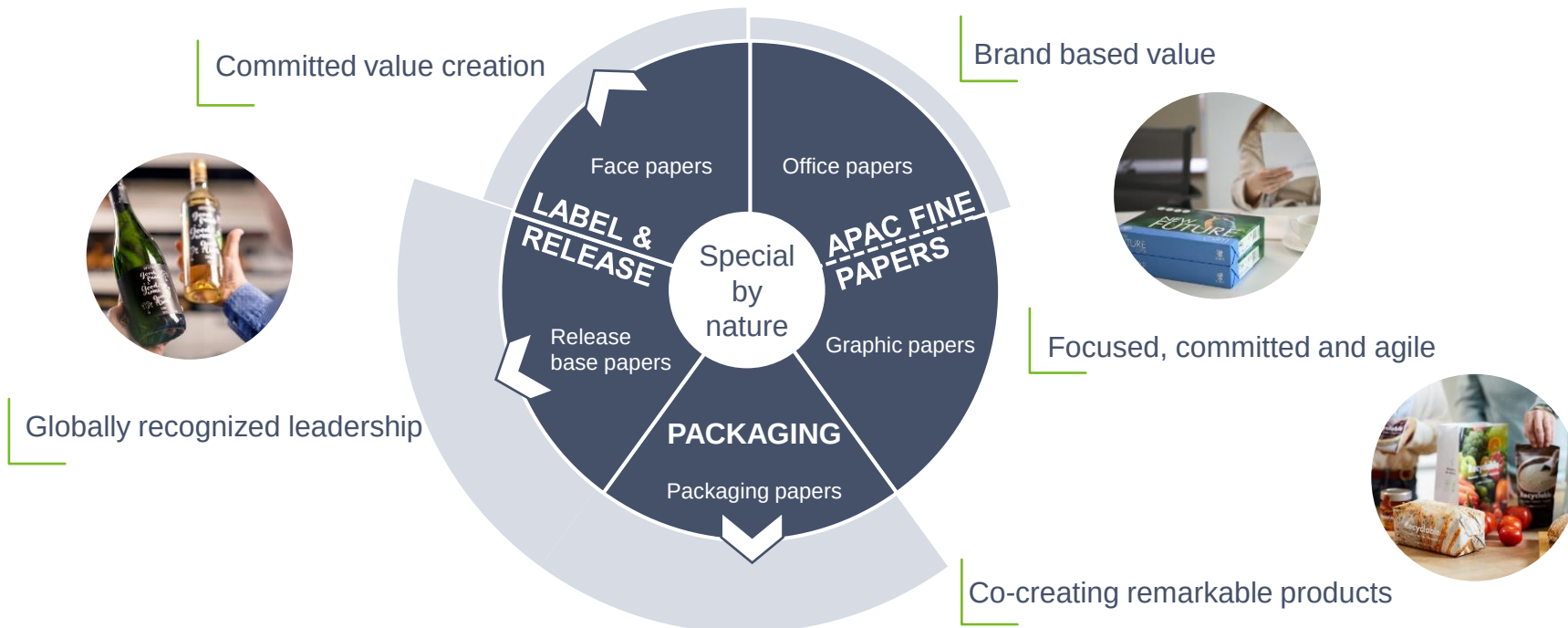
One of the leading players in office papers, focused niche player in graphic papers



Source: AWA, Pira, UPM

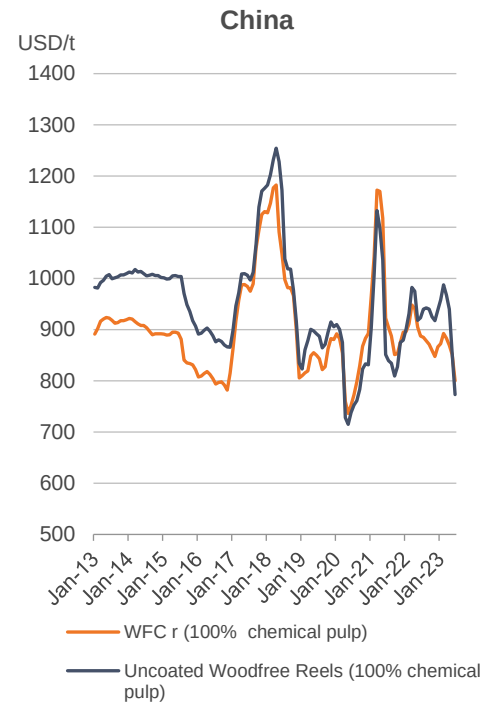
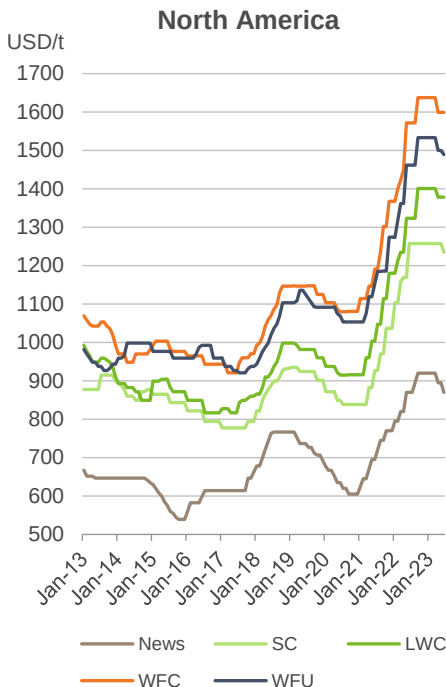
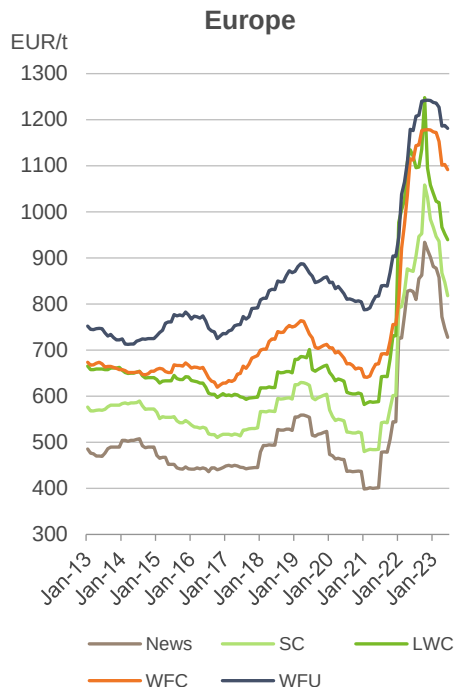
UPM Specialty Papers **GROWTH STRATEGY**

We co-create a future beyond fossils with renewable, recyclable and remarkable papers



UPM Communication Papers

Graphic paper prices

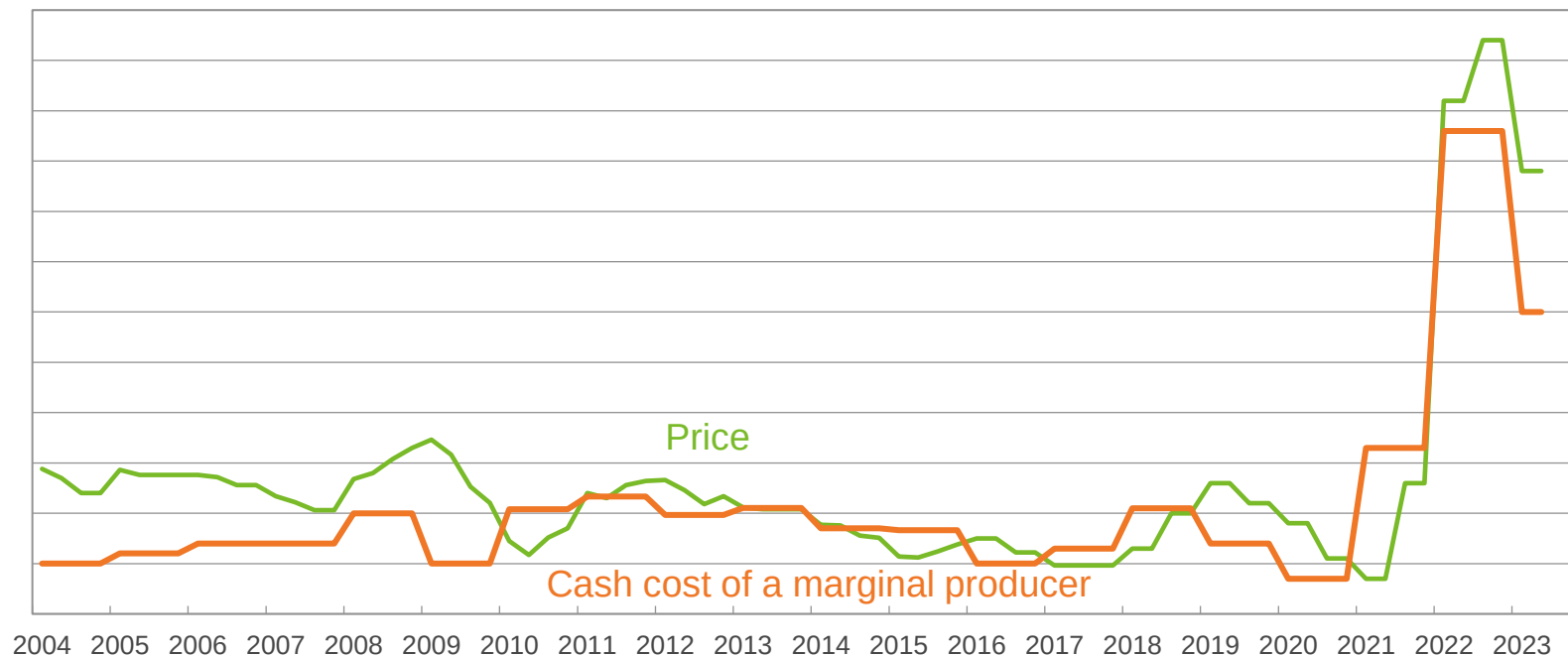


Sources: PPI, RISI

Paper price vs. cash cost of marginal cost producer



EUR/t



Sources: PPI, RISI, AFRY

UPM Plywood focuses on three end use segments



Construction



UPM's position and direction

- Leading position in high and medium range standard products in Europe through well established distribution network providing easy access to WISA® plywood
- Uncompromised sustainability, certified products and operations
- New growth sought by strengthening position in selected emerging markets

Vehicle flooring



UPM's position and direction

- Leading position in Europe
- Competitive edge built on smoothly running operations and needs-based product design creating value to both vehicle manufacturers and operators
- Growth sought by expanding to new markets and related end use segments

LNG shipbuilding



UPM's position and direction

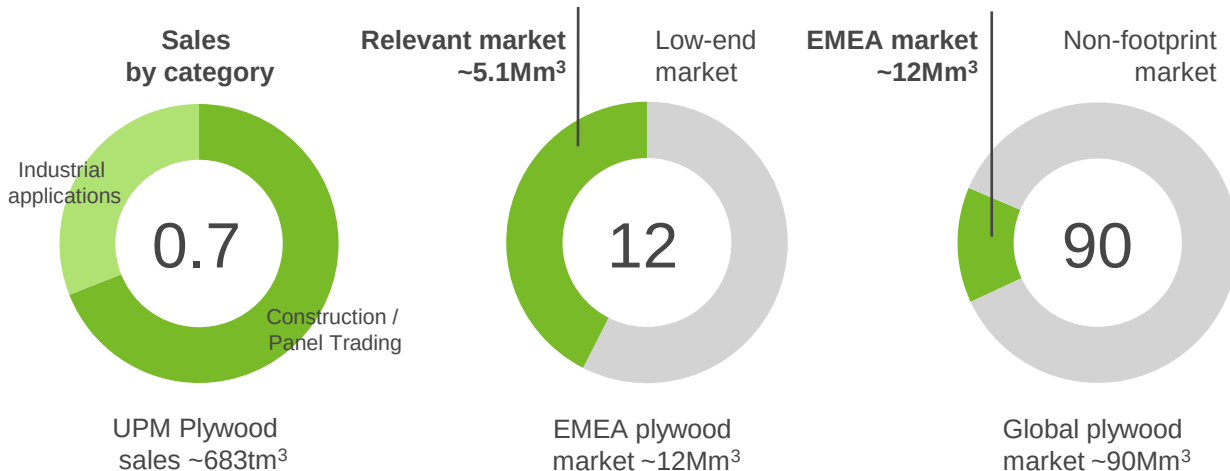
- Leading supplier in LNG plywood
- Competitive edge based on right quality and accurate on-time deliveries
- Long term commitment and benchmark service level
- Focus to secure leading position in LNG carriers and to extend offering into related applications using the same technologies (e.g. land storage tanks)

UPM's key markets are in the high and mid segments primarily in EMEA region



Strategic choices

1. Demanding industrial applications
2. High and medium range standard products
3. Selected customers
4. EMEA region and LNG business globally



Moving forward with biofuels growth plans

Basic engineering phase of a next generation biorefinery



Potential industrial scale biofuels biorefinery



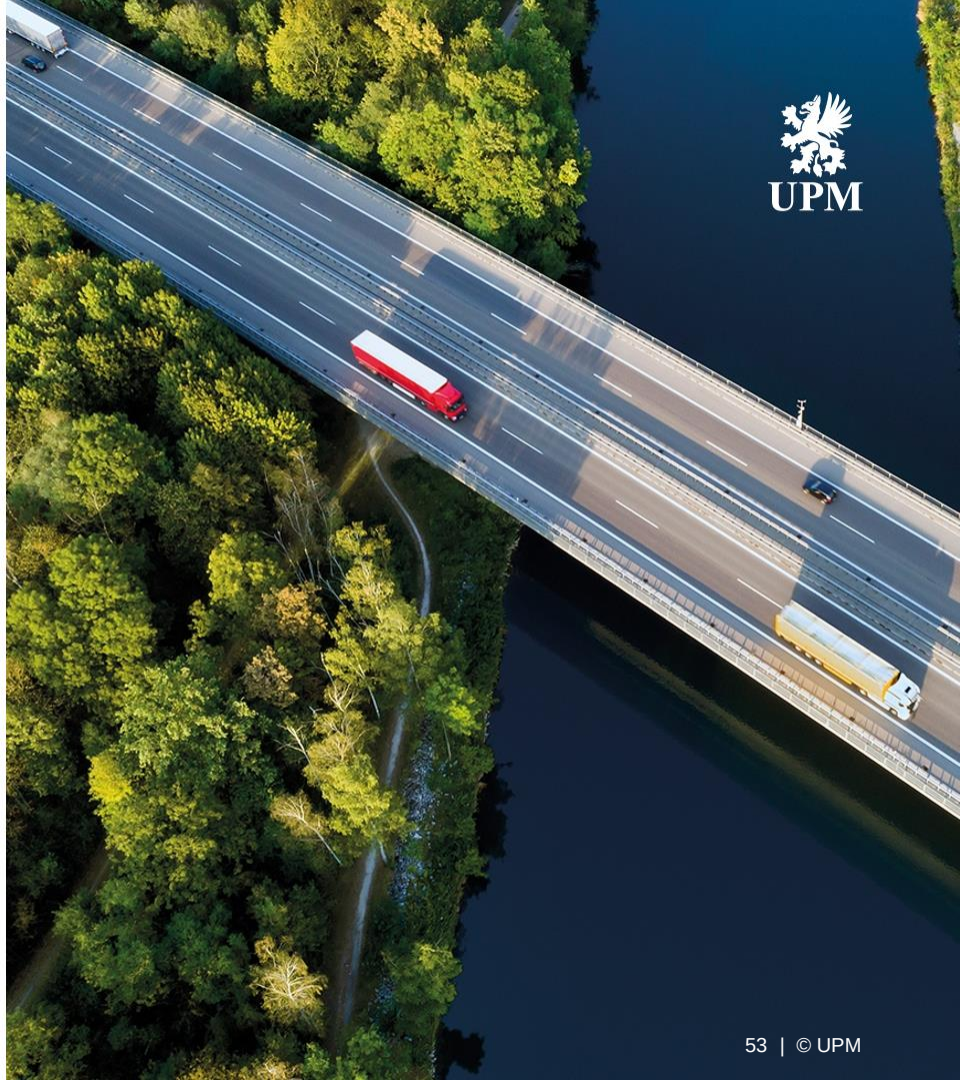
Products would significantly reduce carbon footprint in the road transport and aviation



Capacity would be up to 500,000t of renewable fuels incl. sustainable jet fuel



Potential investment in Rotterdam, the Netherlands.



UPM Biofuels' competitive edge to be built on resilient ecosystem and agility to select markets



NEW SUSTAINABLE BIOMASS

Sustainable and uniquely upstream integrated feedstock pool

- Additionality
- Climate positive land use



Carbon stored to soil in each cycle

CLIMATE-POSITIVE FUELS

Efficient carbon neutral production



Cellulosic fuels

Renewable diesel, gasoline and jet

E-fuels future potential

DECARBONIZED TRANSPORT AND PETROCHEMICALS

Flexibility to create maximum value from several end uses and market geographies



UPM and hydrogen – growth opportunities in large-scale green hydrogen solutions

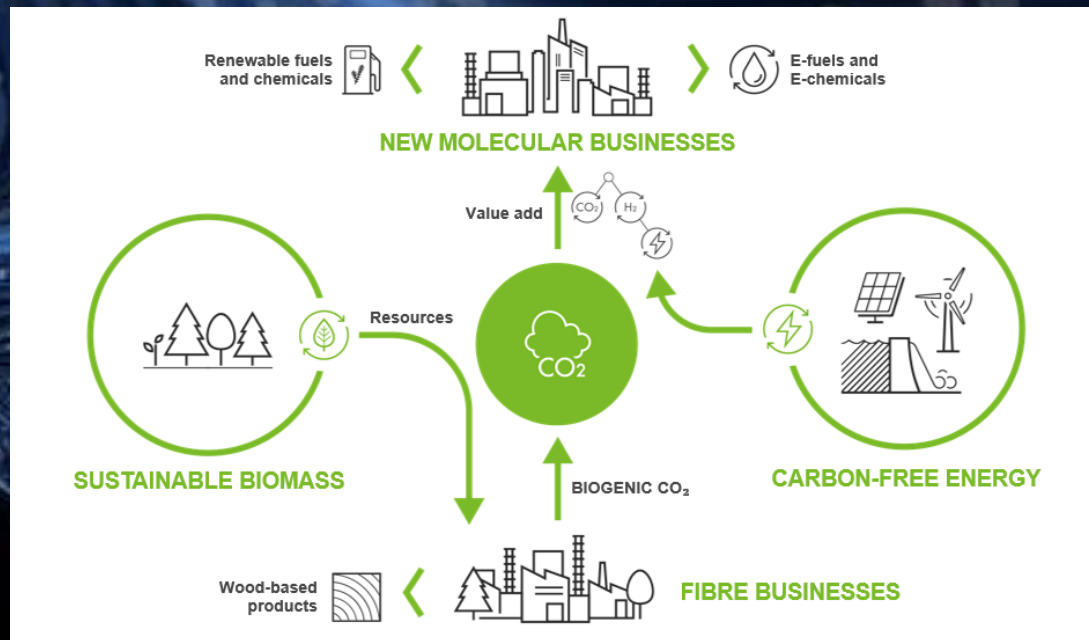


Decarbonisation will require synthetic fuels and new low-emission electricity generation

- demand for e-fuels will be driven by regulation and EU's target to decrease dependency on Russian fossil fuels

UPM has competitive advantage

- experience and in-depth knowledge on energy markets
- decarbonisation and energy optimization tools and skills
- experience on biorefinery operations
- available biogenic CO₂ needed in the production of some e-fuels



UPM **BIOFORE**
BEYOND FOSSILS

