



UPM Biofore – Beyond fossils

Investor presentation, April 2020

UPM **BIOFORE** - BEYOND FOSSILS



UPM BIOREFINING

Pulp
Plantations
Biofuels
Sawmills
Wood Sourcing
and Forestry

UPM ENERGY

Hydro-, nuclear-
and thermal power
(incl. shares in
energy companies)
Electricity generation
and trading
Optimisation services

UPM RAFLATAC

Label materials for
branding and
promotion,
informational labels,
and labels with
functionality

UPM SPECIALTY PAPERS

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

UPM COMMUNICA- TION PAPERS

Extensive product
range of graphic
papers for
advertising and
publishing
as well as home
and office uses

UPM PLYWOOD

WISA® Plywood
and veneer products
for construction and
industrial
applications

UPM BIOCHEMICALS

Wood-based biochemicals
for variety of industrial
uses

UPM BIOMEDICALS

Wood-based products for
biomedical applications

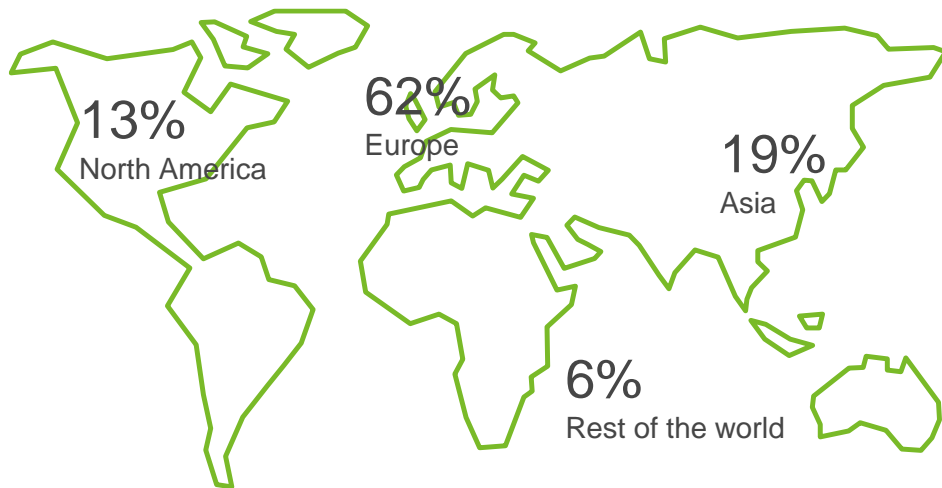
UPM BIOCOMPOSITES

UPM ProFi decking products
and UPM Formi granules

Global businesses – local presence

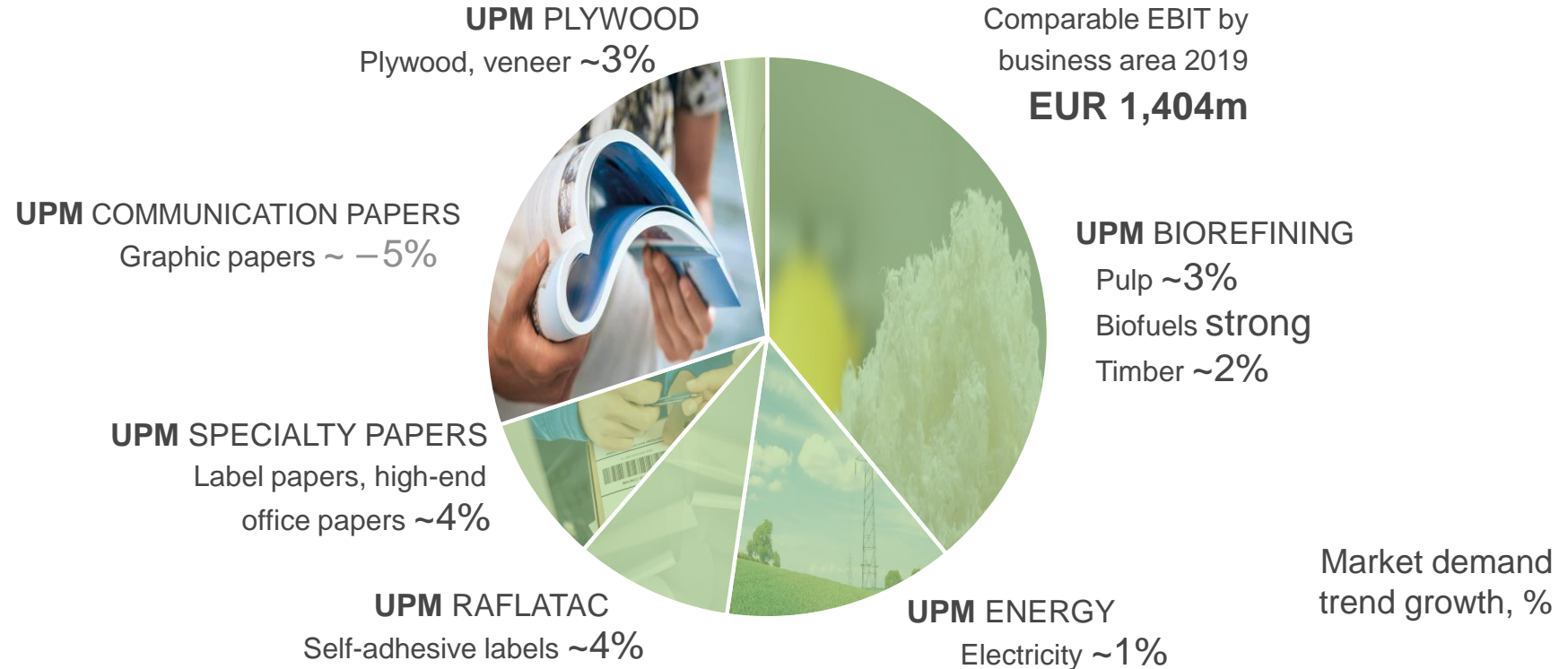
UPM's sales by market

EUR 10,238 million



54	production plants in	12	countries
18,700	employees in	46	countries
12,500	customers in	120	countries
100,700	shareholders in	32	countries
24,000	b-to-b-suppliers in	81	countries

Operating on healthily growing markets



UPM in transformation



2009		2019		Operating model
Sales				Promotes value creation
Sales	EUR 9.5bn	EUR 10.2bn		Business portfolio Increasing share of businesses with strong long-term fundamentals for profitability and growth
EBIT *)	EUR 270m	EUR 1,404m		
ROE *)	1.0%	11.2%		
Net debt	EUR 3.7bn	EUR -0.45bn		Business performance Continuous improvement in financial, social and environmental performance
Market cap	EUR 4.3bn	EUR 16.5bn		
				Disciplined capital allocation Driving value creation

Biofore strategy

We create value by seizing the limitless potential of bioeconomy



PERFORMANCE



GROWTH



RESPONSIBILITY



INNOVATION

Strong long-term fundamentals for demand growth and high barriers to entry

Our spearheads for growth

SPECIALTY PACKAGING MATERIALS

Label
materials

Specialty
papers

Communication papers

HIGH VALUE FIBRE

Forests

Pulp

Plywood

MOLECULAR BIOPRODUCTS

Biofuels

Biochemicals

Energy

Driving long-term value creation –
mitigating climate change



UPM **BIOFORE-BEYOND** FOSSILS



We act through **FORESTS**
Climate-positive forestry



We act through **EMISSIONS**
65% less CO₂ emissions



We act through **PRODUCTS**
Innovate novel products

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

Industry leader in responsibility



MEMBER OF

**Dow Jones
Sustainability Indices**

In Collaboration with RobecoSAM



Global Compact
LEAD
2019 PARTICIPANT

MSCI
ESG RATINGS



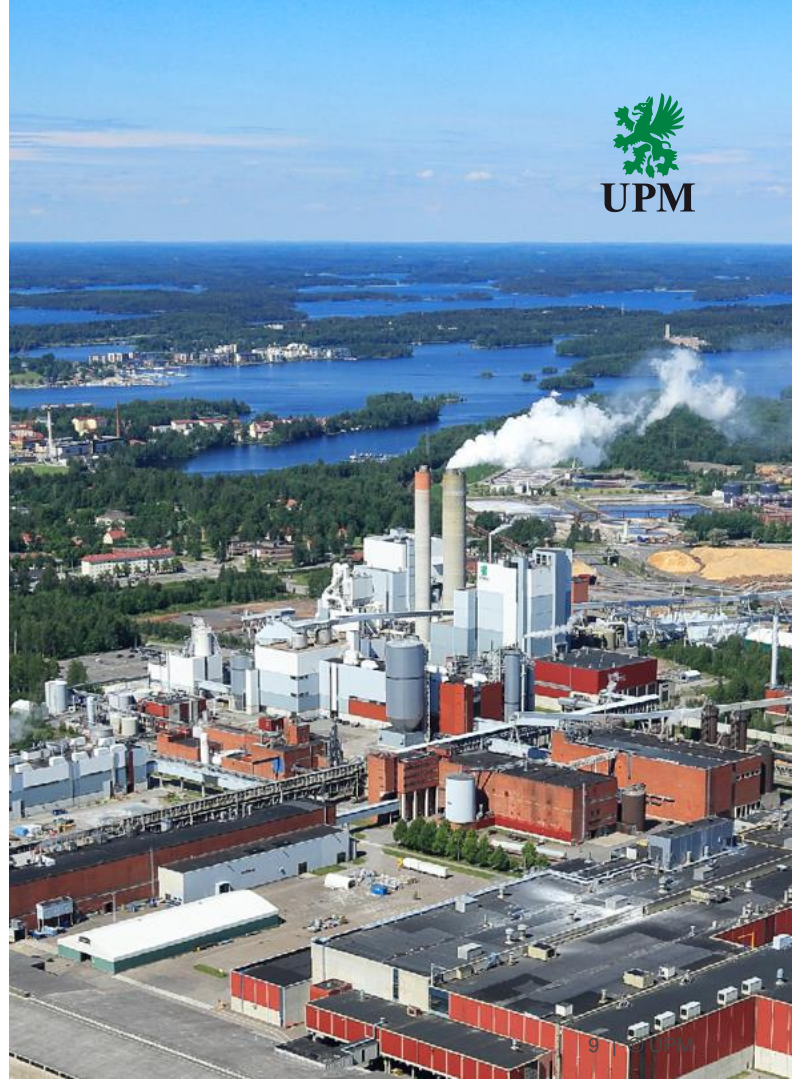
CCC	B	BB	BBB	A	AA	AAA
-----	---	----	-----	---	----	-----

<https://www.msci.com/documents/1296102/1523388/6/How-to-Reference-an-MSCI-ESG-Rating-Final.pdf>

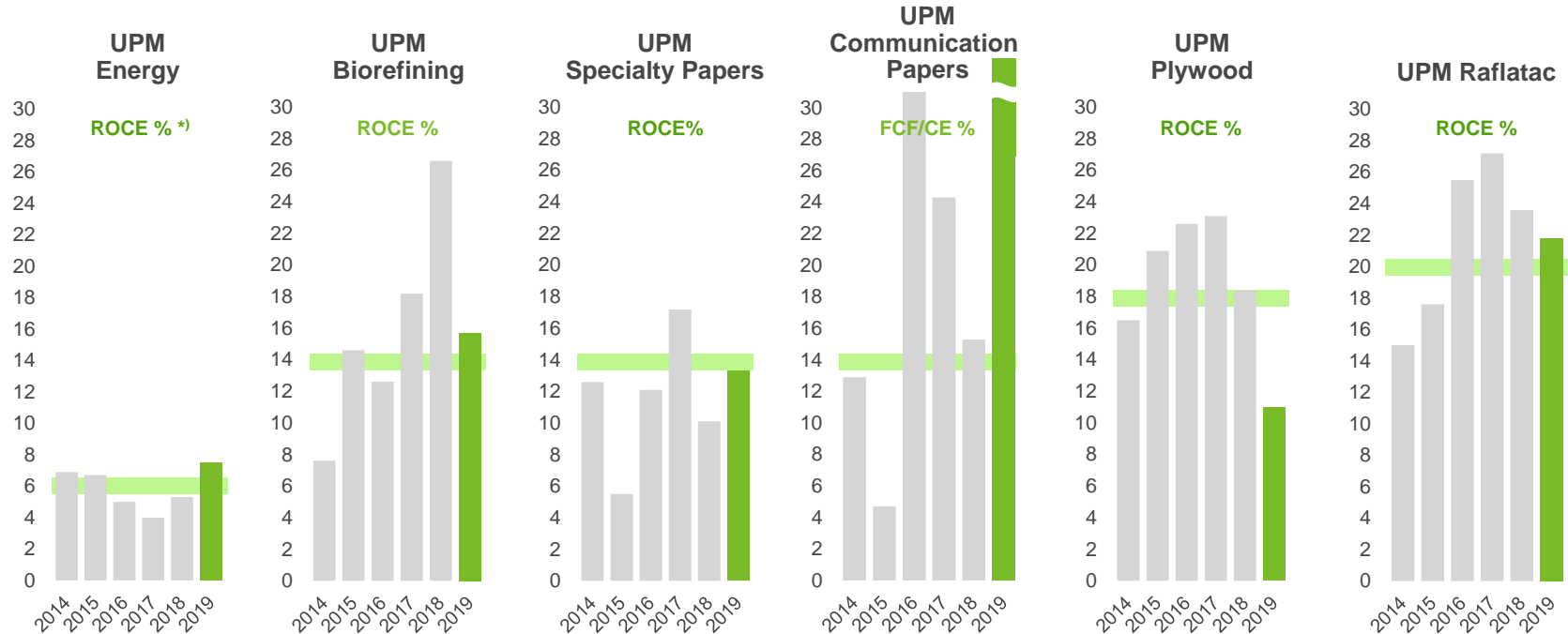


**Sustainability Award
Gold Class 2020**

UPM **BIOFORE-BEYOND** FOSSILS

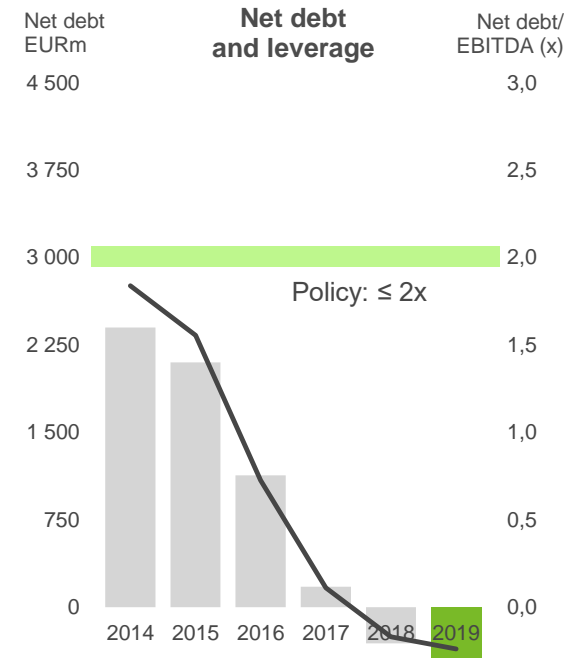
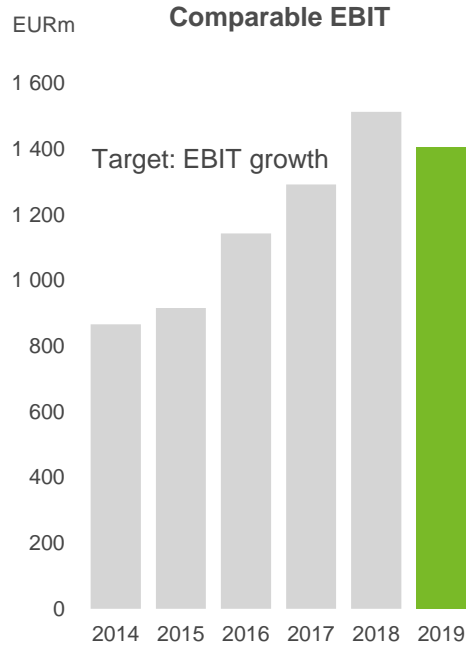


Business area returns and long-term targets

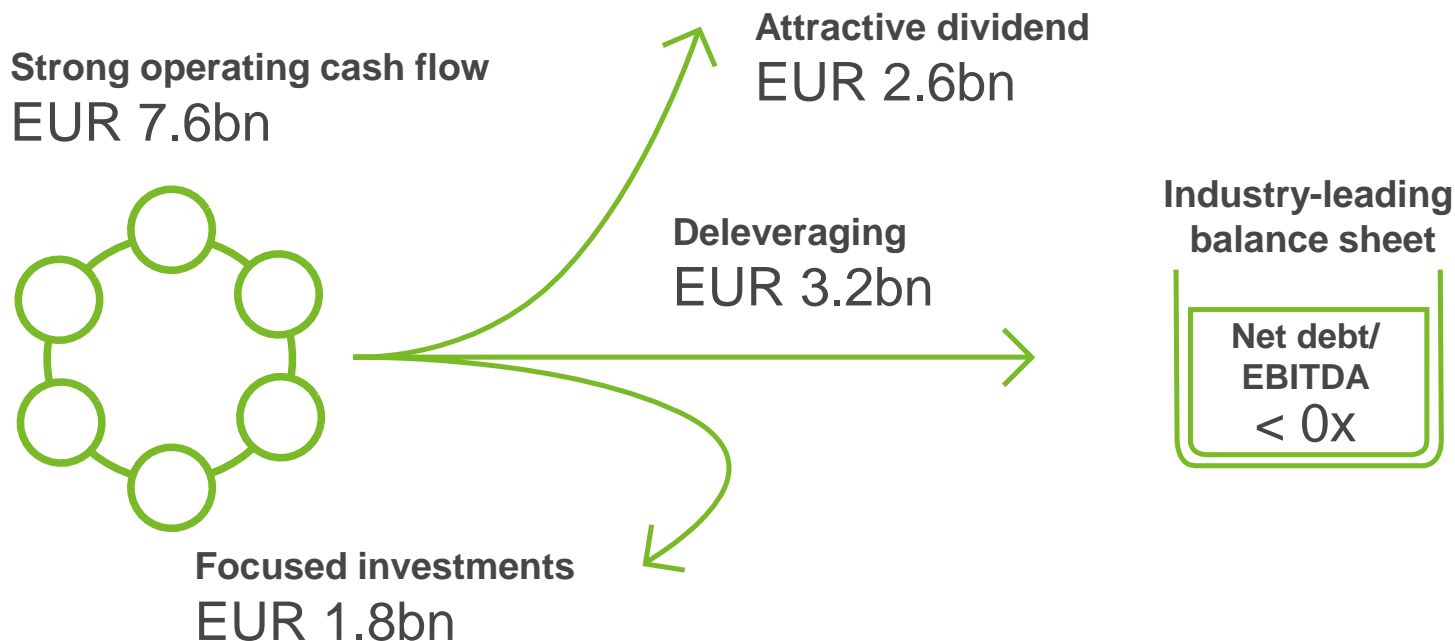


*) shareholdings in UPM Energy
valued at fair value

Group financial performance

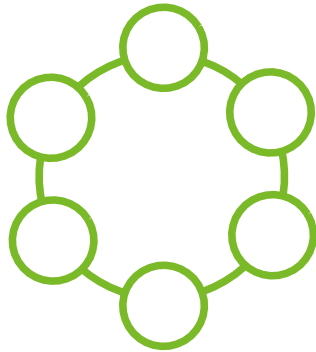


5-year cumulative cash flow (2015–2019) – efficient capital allocation in action



Illustrative capital allocation ^{*)} for the next 5 years

Performance focus
Strong cash flow



Attractive dividend
EUR ~3.5–4bn

High return
investments
EUR ~4-4.5bn

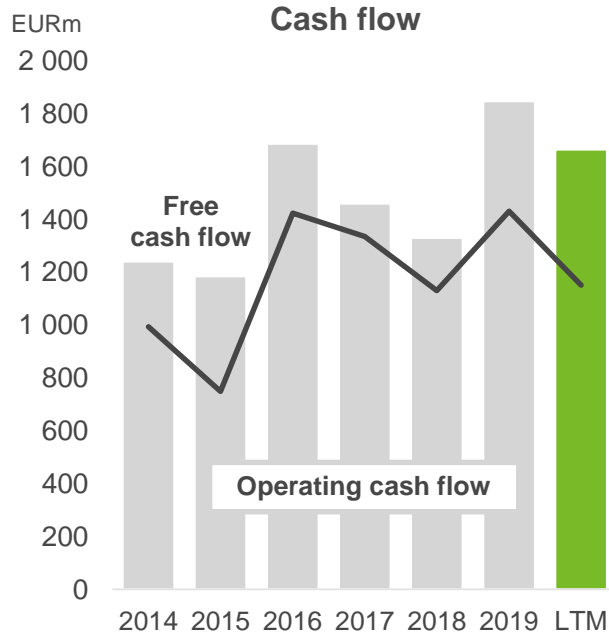
Industry-leading
balance sheet

Net debt/
EBITDA
< 2x

Maintain headroom

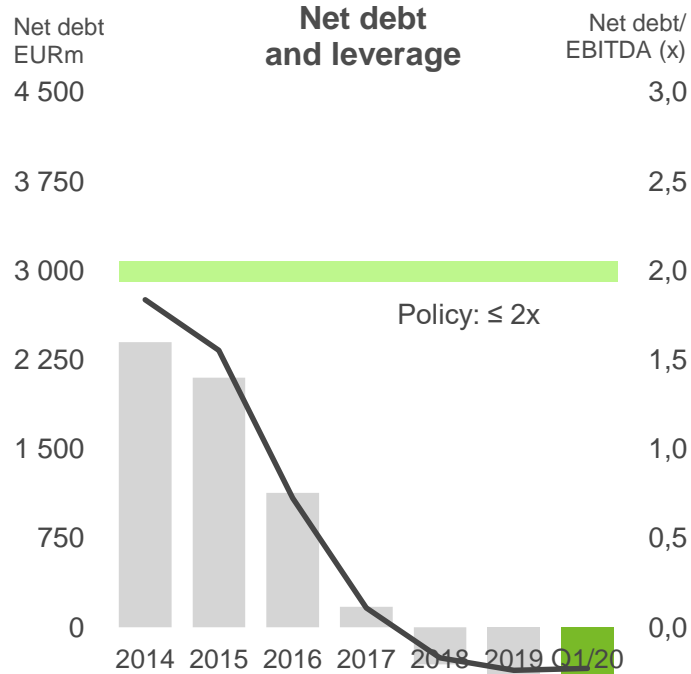
^{*)} This is not a forecast

Consistent cash flow



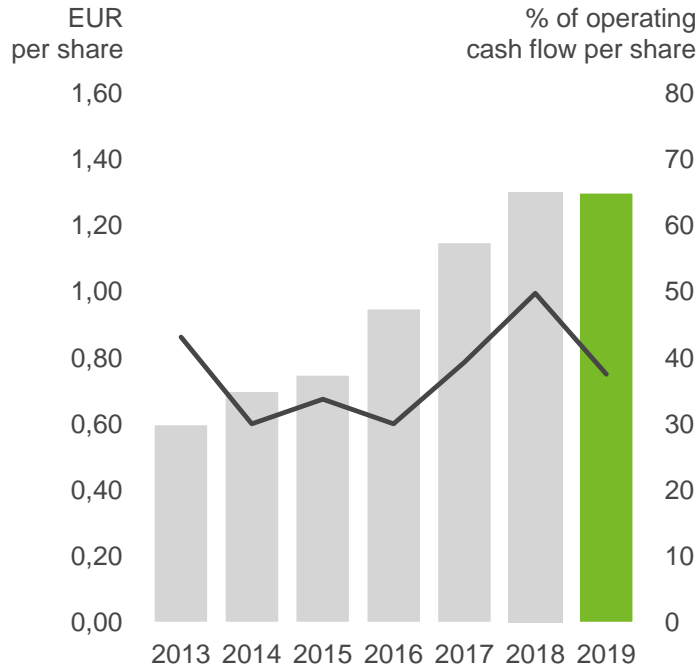
- Q1/20: operating cash flow was EUR 137m (320m in Q1/19), after the record level in Q4/19
- Working capital increased seasonally by EUR 212m (increased by 111m in Q1/19, decreased by EUR 227m in Q4/19)

Exceptionally strong financial position



- Net debt EUR -405m at the end of Q1
- Cash funds and committed credit facilities EUR 2.2bn at the end of Q1
- Includes a new EUR 750m sustainability-linked revolving credit facility
- No financial covenants

Dividend for 2019: EUR 1.30 per share



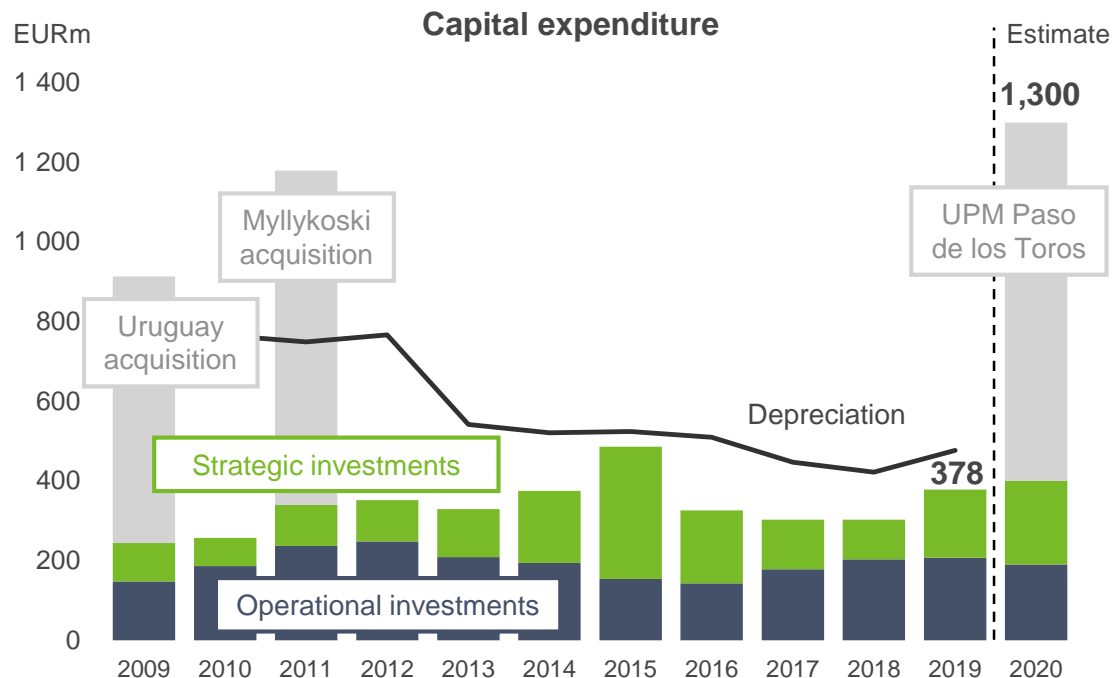
Long term dividend policy

- UPM aims to pay an attractive dividend, 30–40% of operating cash flow per share

Dividend for 2019

- EUR 1.30 (1.30) per share, totalling EUR 693m
- 38% of 2019 operating cash flow

Transformative growth projects in pulp and biochemicals, low investment needs in existing assets



Capex estimate for 2020

- Total EUR 1,300m
- Includes EUR 900m on the new pulp mill and related capex in Uruguay
- Operational investment needs consistently low

2020 and the COVID-19 pandemic

– safety, business continuity, demand and adjusting



UPM has implemented extensive precautions to protect the health and safety of its employees and to ensure business continuity and progress of its strategic projects.

Despite these efforts it is possible that during the pandemic the operation of one or more units or the supply chain and logistics could be disrupted.

Many of UPM products serve essential everyday needs and may see relatively resilient demand during the crisis. These products include pulp, specialty papers and self-adhesive label materials.

Demand for graphic papers, plywood and timber is likely to be affected by the pandemic-related lockdowns and the following recession. The lockdowns limit a wide range of services and retail that utilise printed advertising, as well as work at the office. This is likely to have a temporary negative impact on graphic paper demand.

UPM is planning to use shift arrangements, temporary lay-offs or reduced working hours as required to adjust to different scenarios.

2020 and the COVID-19 pandemic

– investment projects and maintenance shutdowns



The pandemic and the required health and safety measures add challenge to large investment projects and maintenance shutdowns.

UPM Paso de los Toros pulp mill and related projects in Uruguay and UPM Leuna biochemicals refinery project in Germany are proceeding with strict health and safety controls. Despite these efforts, some changes to detailed timeline of the projects are possible during the pandemic. Currently the projects proceed in line with the planned start-up timeline.

Due to the COVID-19 pandemic, fuel loading into OL3 reactor will not take place in June 2020 as planned. It is possible that regular electricity production would be delayed respectively.

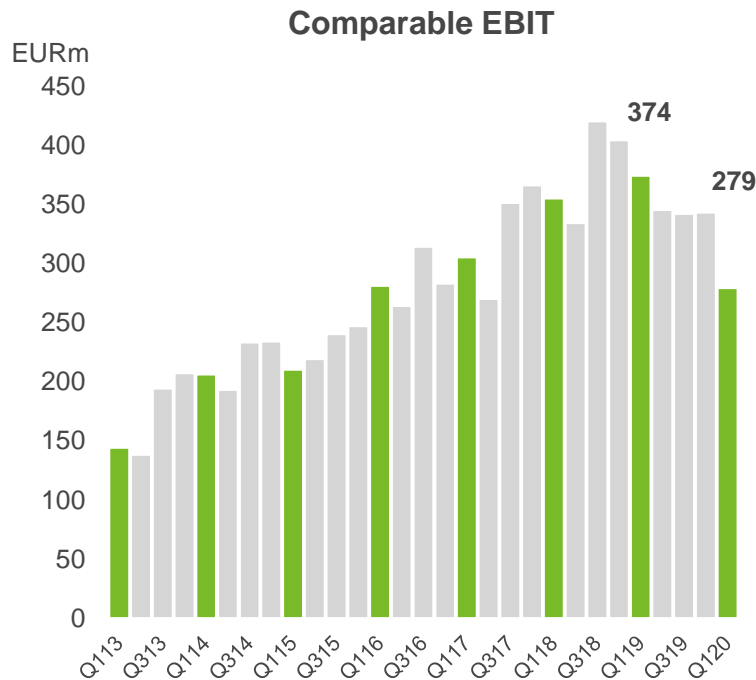
UPM has rescheduled two pulp mill maintenance shutdowns from Q2 2020 to Q4 2020.

The maintenance shutdown at the OL1 nuclear power plant in Q2 2020 will be shorter than usual.

Q1 2020: solid results, UPM well prepared for the current uncertainty and future recovery

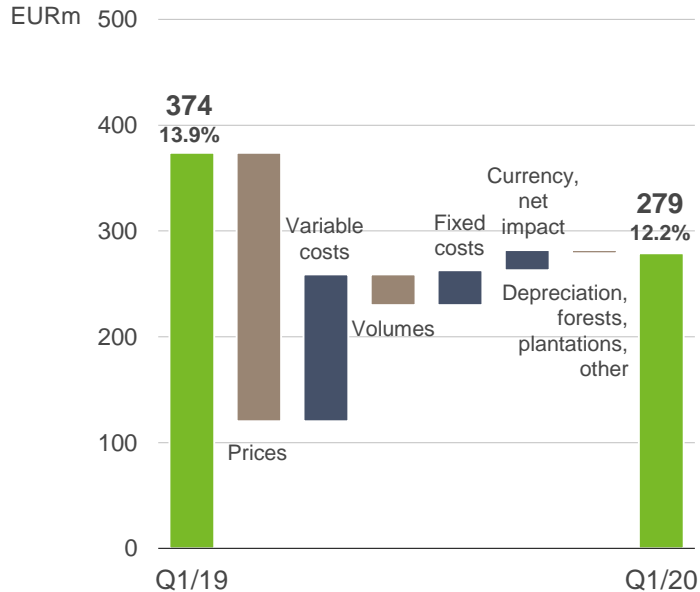


- Sales decreased by 15% to EUR 2,287m (2,693m in Q1 2019) due to lower pulp price and lower deliveries of graphic papers
- Comparable EBIT decreased by 26% to EUR 279m (374m)
- The strike in Finland affected UPM's pulp, paper, plywood and timber operations
- The COVID-19 pandemic did not materially impact UPM's operations in Q1
- Record comparable EBIT in UPM Raflatac and UPM Specialty Papers

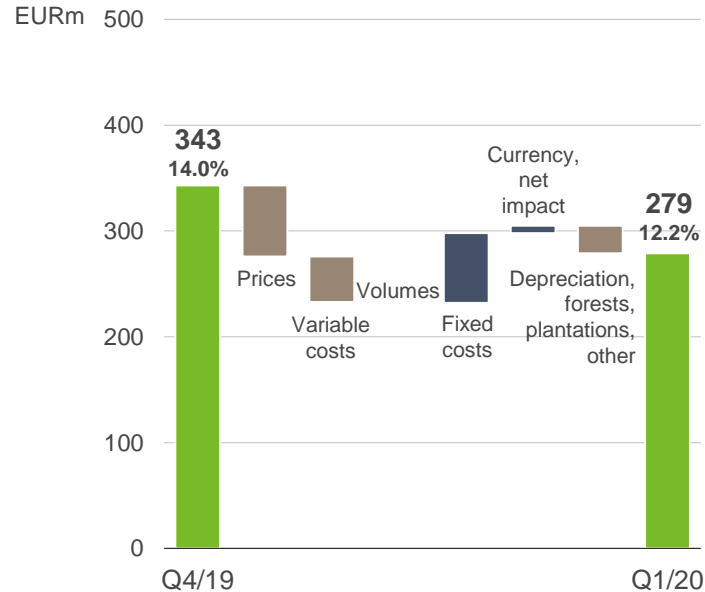


Comparable EBIT in Q1 2020

Sales prices decreased, clearly outweighing the impact of lower variable costs.
Fixed costs decreased, offsetting lower deliveries.

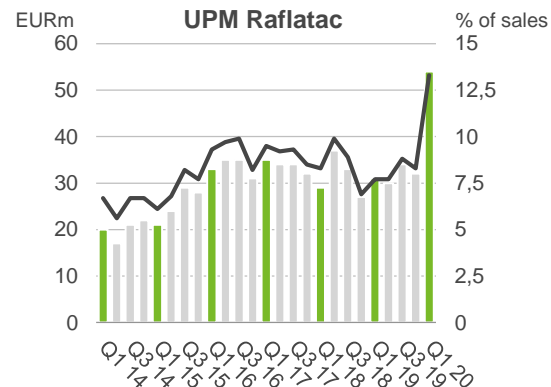
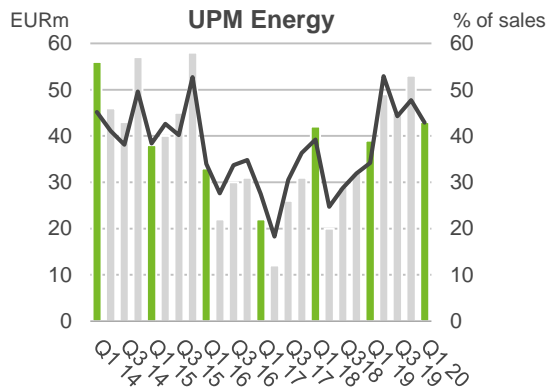
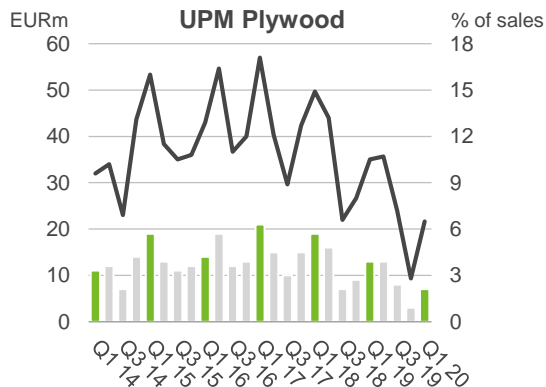
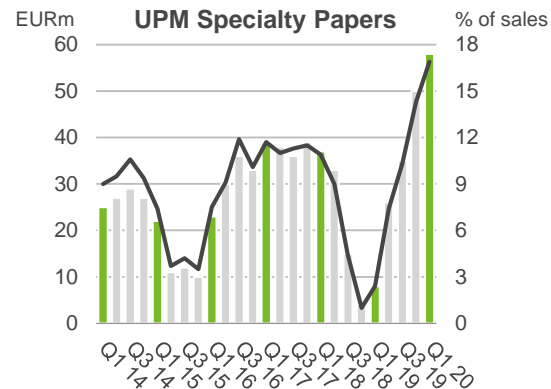
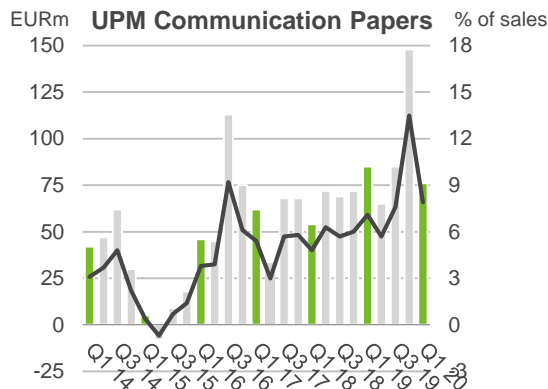
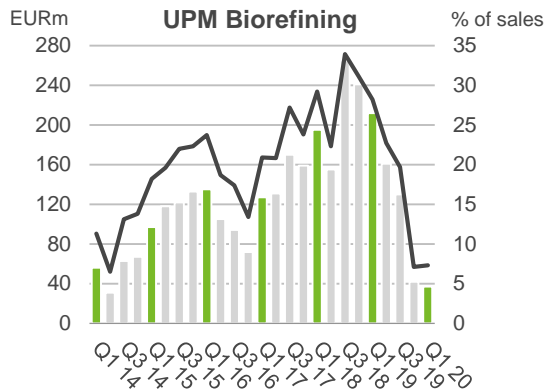


Sales prices decreased.
Seasonally higher energy costs, seasonally lower fixed costs.
No forest value gains in Q1/20.





Comparable EBIT by business area



Continuously taking action to ensure competitiveness

UPM Communication Papers

- UPM Plattling PM 10 (LWC)
-155kt closed down in Q3 2019
- UPM Rauma PM 2 (SC)
-265kt, closed down in Q4 2019
- UPM Chapelle (newsprint)
-240kt, plan to close down or sell by the end of Q2 2020
- UPM Nordland PM2 (fine)
-200kt, conversion to release liner in Q1 2020
- New power plant in UPM Nordland
in Q3 2022

All business areas and functions

- Continuous improvement programmes
Variable costs, working capital, commercial strategies, maintenance and site costs, safety, environmental performance
- Efficient use of assets
- Fixed cost reduction
- Product and mix development
- Digitalisation
Customer interface, planning, data analytics

UPM Biochemicals

UPM invests in next generation biochemicals

- EUR 550 million investment in an industrial scale biorefinery at Leuna, Germany
- 100% wood-based biochemicals provide alternatives to fossil materials in various consumer-driven end-uses
- Total annual capacity of 220,000 tonnes
- Scheduled to start up by the end of 2022
- Safety and sustainability of the value chain based on UPM's high standards



UPM BIOCHEMICALS

UPM creates a totally new sustainable business with large growth potential



- Major milestone in UPM's transformation
- UPM biochemicals respond to the customers' increasing needs for renewable alternatives
- Current supply is limited and high-quality biochemicals are priced at a premium
- Sustainable wood supply, unique technology, existing infrastructure and proximity to customers enables a good cost position
- Attractive returns: ROCE target of 14% once the facility is fully ramped up and optimized



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

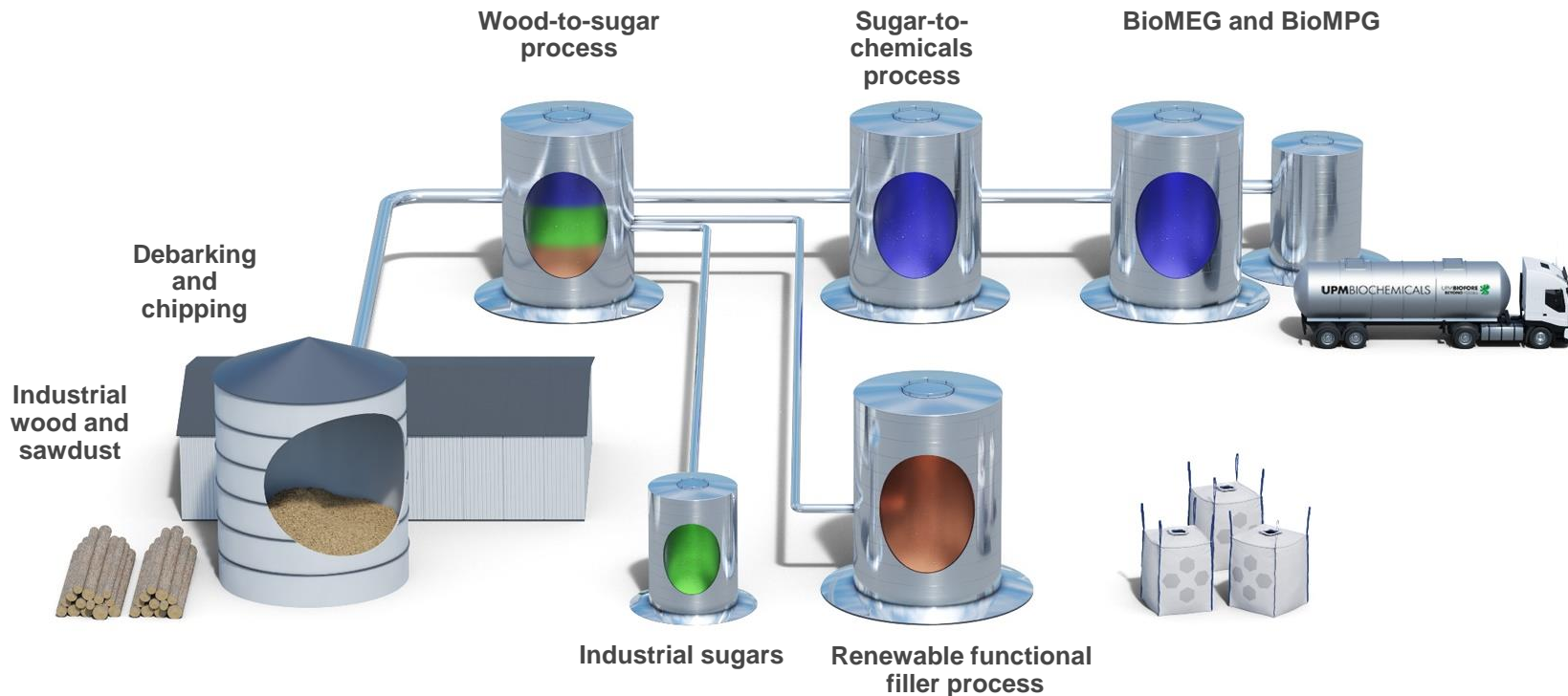


Large growth markets – unique sustainability value



- 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

Unique technology converting wood to biochemicals



Attractive location in Germany and efficient value chain



- UPM is a responsible local producer with an entirely European value chain
- Chemical Site Leuna provides existing processes, logistics arrangements and infrastructure for various services and utilities
- Strong chemicals cluster in Germany with proximity to customers and suppliers
- Good availability of sustainably sourced hardwood from forest thinnings and residues of sawmills
- Innovation-friendly environment with strong universities, institutes and skilled potential employees



UPM invests in a world class pulp mill in Uruguay



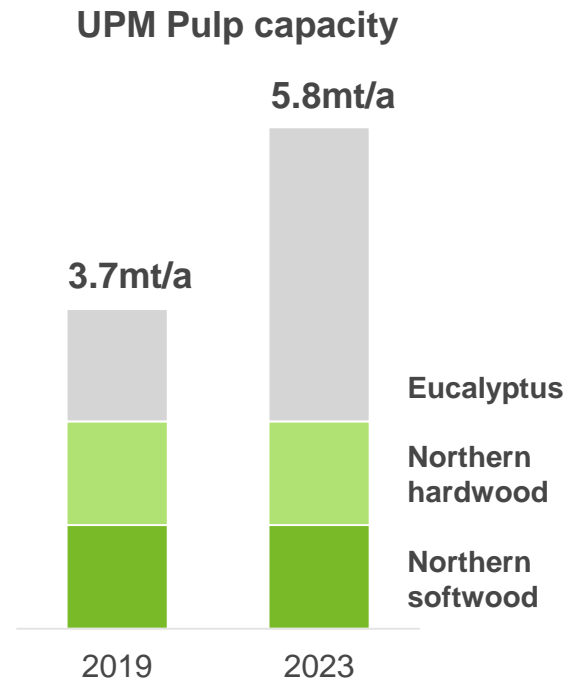
- A highly competitive new pulp mill with annual production capacity of 2.1 million tonnes of eucalyptus pulp
- Mill investment of USD 2.7 billion
- Investments in port operations in Montevideo, local facilities in Paso de los Toros of USD 350 million
- Scheduled start-up in H2 2022
- Industry-leading safety and sustainability performance of the value chain from plantations to customers



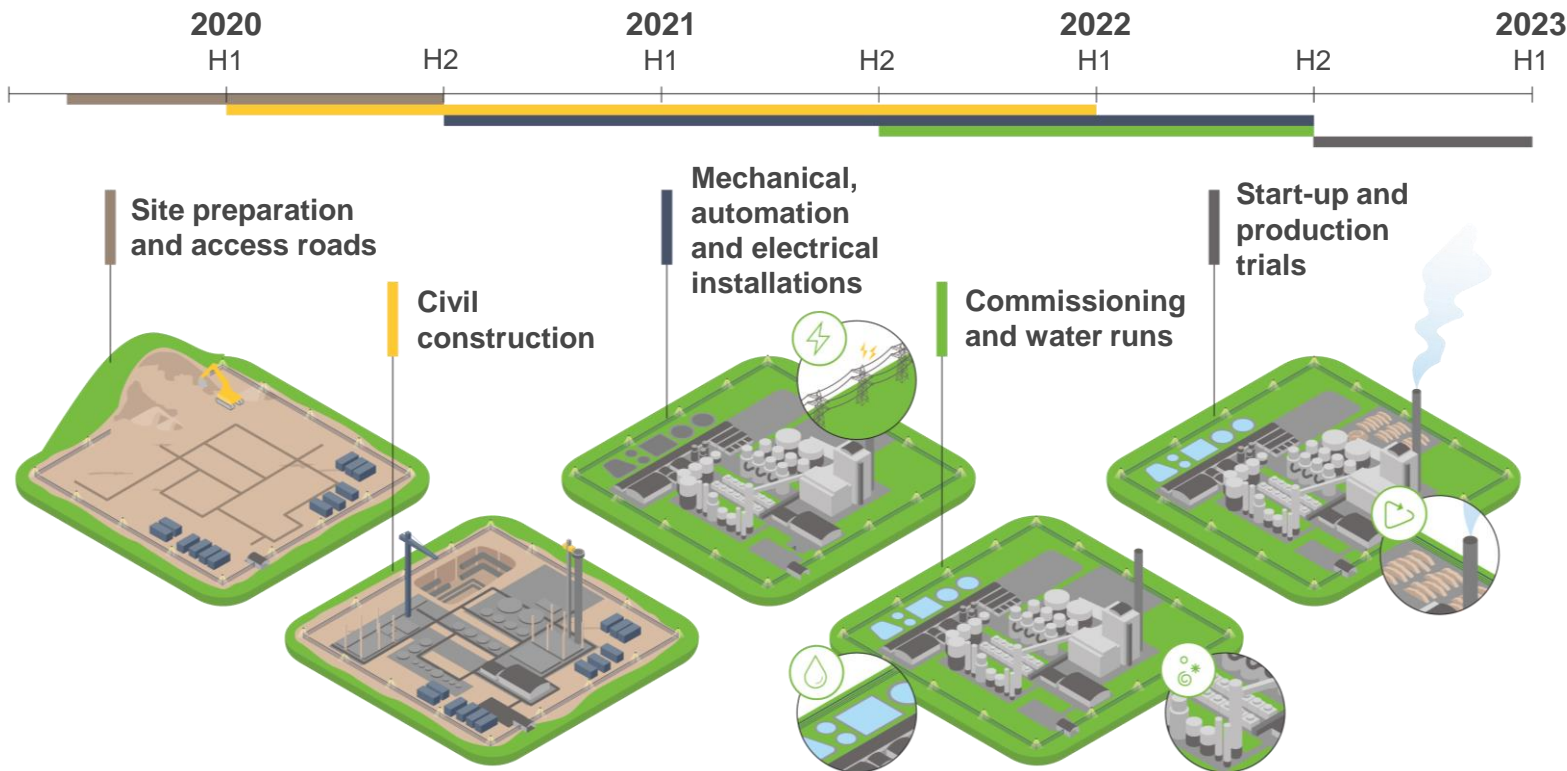
Transformative step in UPM's pulp business and in UPM's future earnings



- 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



UPM Paso de los Toros pulp mill construction schedule



State of the art mill design



- Initial production capacity of 2.1 million tonnes of eucalyptus pulp, with further potential
- Mill investment USD 2.7 billion, efficient investment level compared with corresponding projects
- World-class single line pulp mill and Best Available Techniques (BAT)
 - Excellent safety
 - Proven high environmental performance
 - High availability and maintainability
 - High energy output, surplus renewable electricity 110 MW
 - Low costs



Competitive wood supply



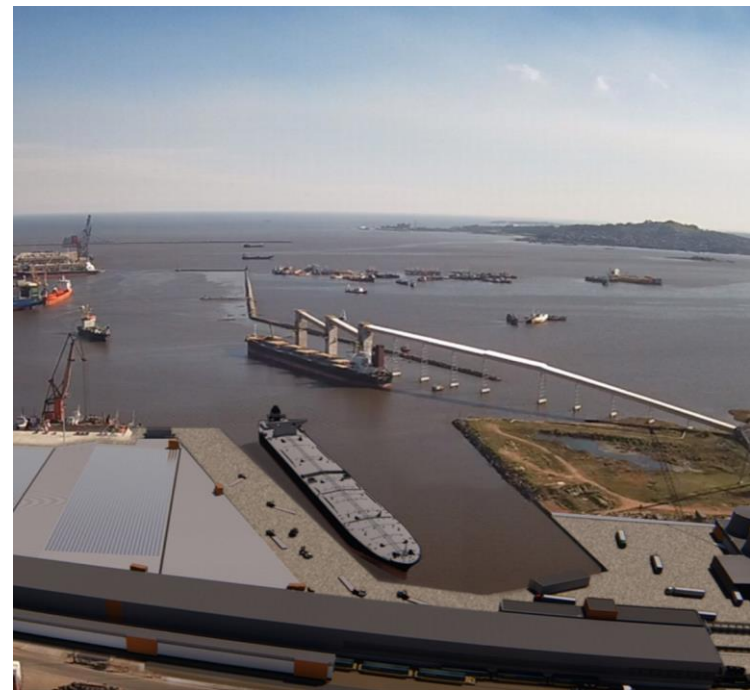
- Eucalyptus availability secured through UPM's own and leased plantations and wood sourcing agreements with private partners
- UPM's own and leased plantations in Uruguay cover 420,000 hectares, supplying both UPM Fray Bentos and the new mill near Paso de los Toros
- 30 years experience of sustainably managed and productive plantations



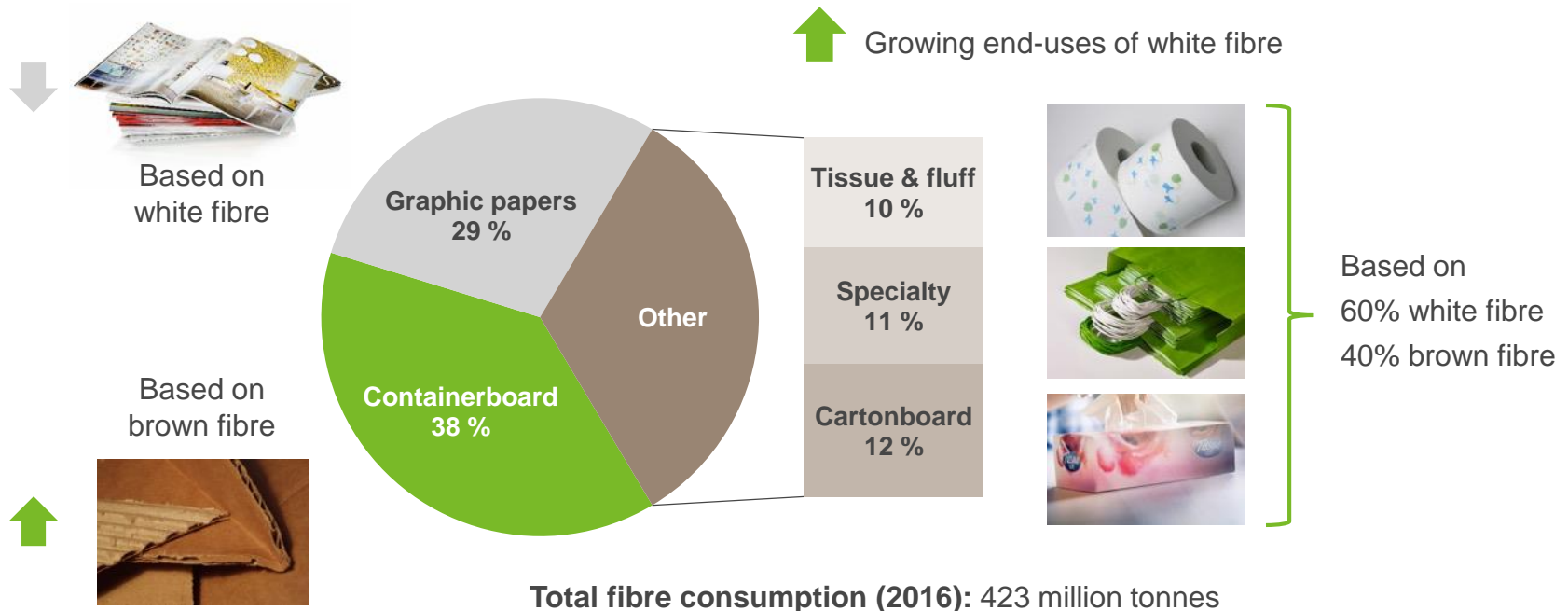
Efficient logistics set-up



- UPM will invest USD 280 million to construct a deep sea pulp terminal in Montevideo port
 - Direct rail access from the mill to a modern port terminal creates an efficient supply chain to world markets
 - Synergies with the UPM Fray Bentos mill
- Agreed railway modernisation
 - Public-private-partnership agreement between the government and the construction company
- Agreed road improvements



Market pulp consumed in growing end-uses – supply of alternative white fibres declines

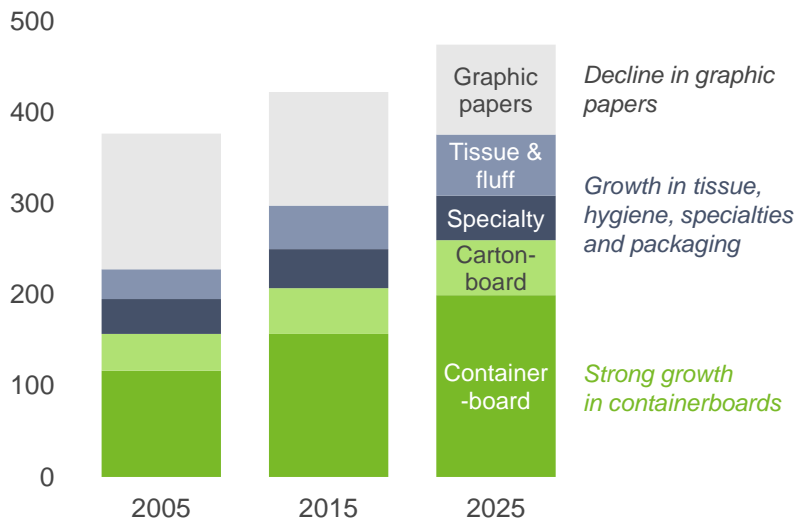


UPM Biorefining

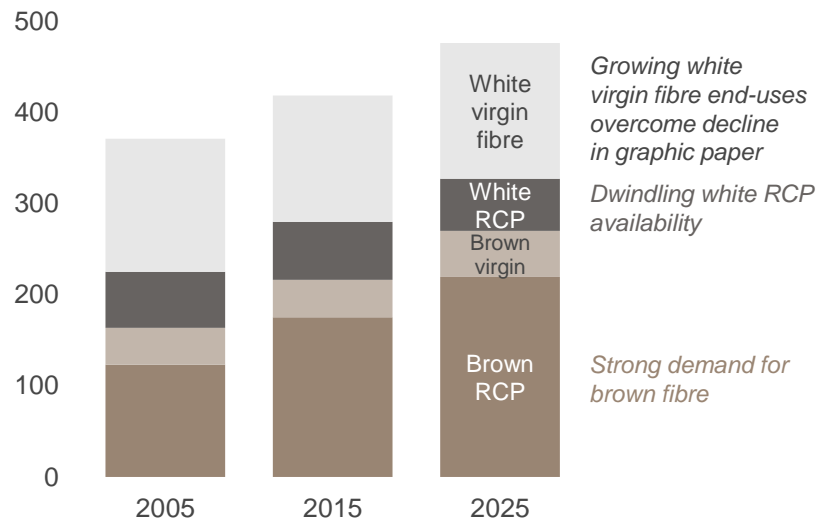
Pulp demand outlook



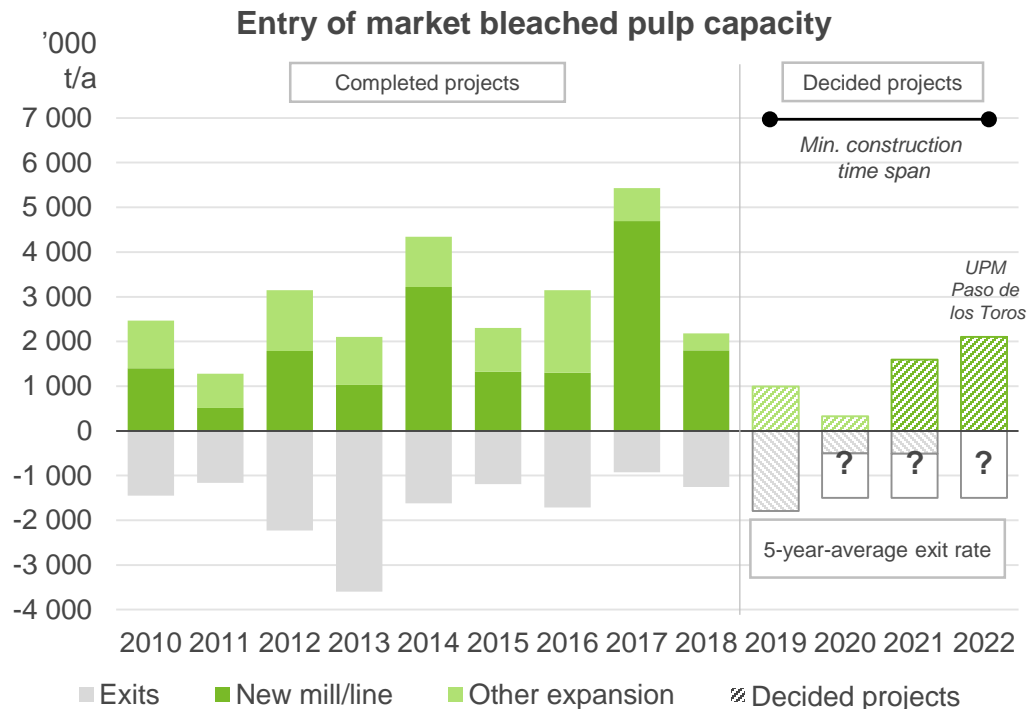
Global consumption of end-uses
in million tonnes



Global consumption of fibres
in million tonnes



Few decided projects coming on stream in the short-term



Below-average rate of expansion

Exits take place

Note: Year 2022 including BHKP, BSKP, excluding fluff and dissolving

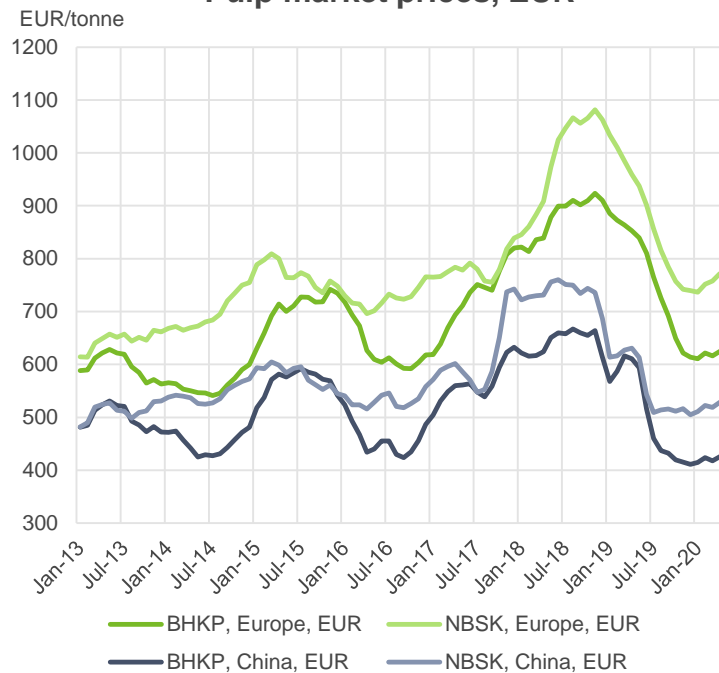
Sources: Pöyry, UPM

UPM Biorefining

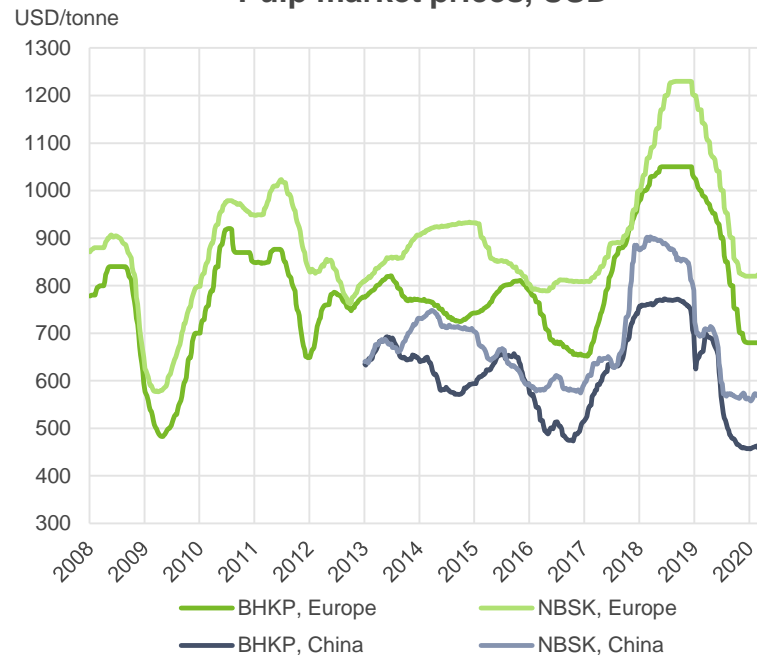
Chemical pulp market prices



Pulp market prices, EUR



Pulp market prices, USD



Source: FOEX Indexes Ltd

Developing our forest assets

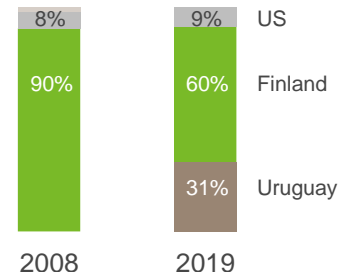
- Investing in strategic forest assets, e.g. in Uruguay
- Releasing capital from forests far from our mills
- Productivity with active management and nurseries
- Strong commitment to sustainability



UPM forests and plantations

	2008	2019
Forest and plantation land (own and rented) (1,000 ha)	1,012	991
Forest growth (million m ³)	4.3	8.9
Wood sourced from UPM forests and plantations (million m ³)	2.2	3.7
Value of forests and plantations, including land (EURm)	1,270	2,688

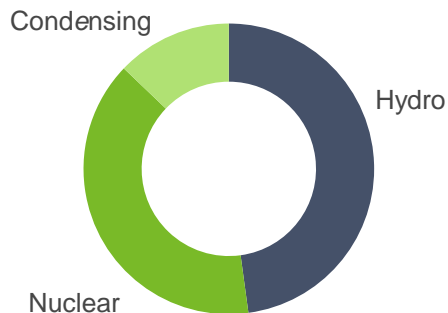
Area distribution



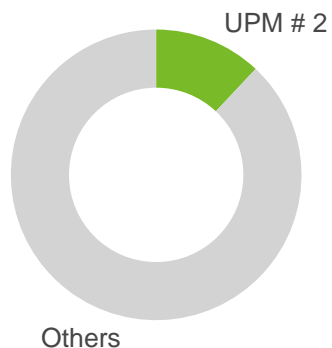
UPM's power generation – competitive in all market conditions



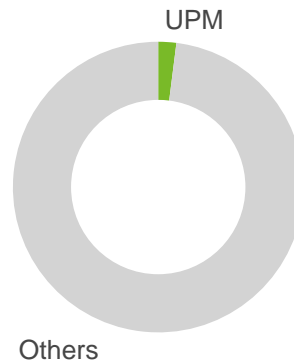
UPM's power
generation assets



UPM in Finland



UPM in Nordics

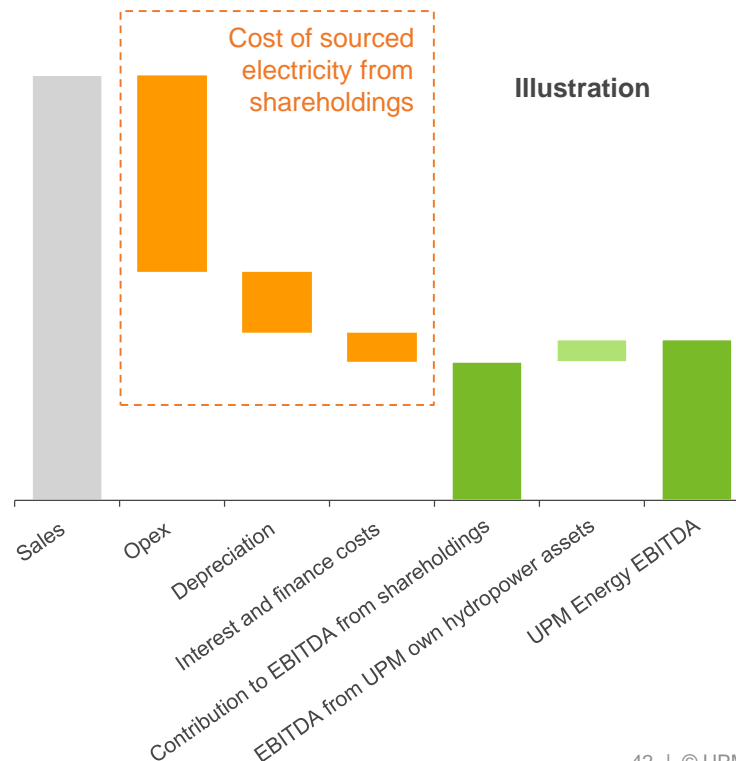


UPM Energy

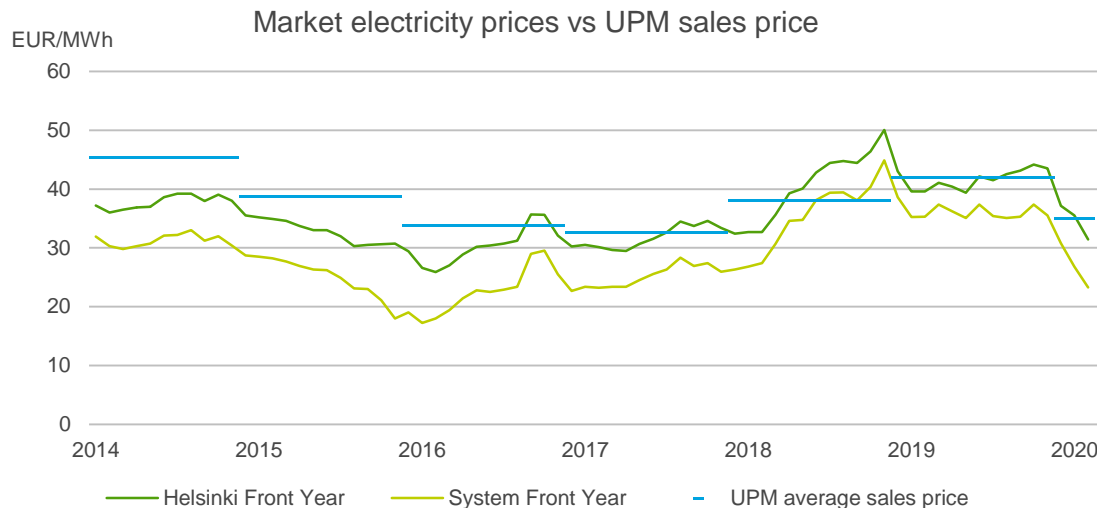


UPM Energy's power generation	MW	EURm
Hydropower holdings	549	748
Nuclear power OL1 and OL2	588	1,145
Nuclear power OL3 under construction	(494)	189
Condensing power	95	1
UPM Energy's shareholdings in total, valued at fair value	1,232	2,082
UPM own hydropower assets	166	
UPM Energy's in total (excl. OL3)	1,398	
UPM Energy capital employed		2,365

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



Cost efficient generation enables robust profitability in changing market environment



UPM Energy profitability	2015	2016	2017	2018	2019	Q1 2020
Comparable EBIT, EURm	181	116	91	123	185	43
% of sales	43.6	32.7	28.8	31.5	44.4	42.9

UPM Energy ROCE



- In UPM balance sheet, UPM Energy shareholdings are valued at fair value
- Energy market transformation is ongoing
- UPM Energy assets are competitive



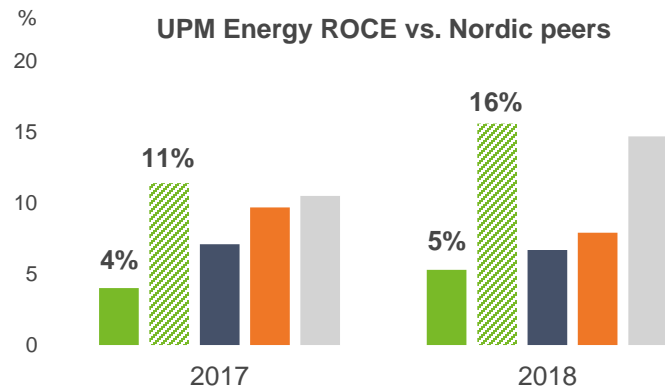
■ UPM Energy comparable ROCE: shareholdings at fair value

▨ UPM Energy ROCE if calculated based on acquisition cost

■ Fortum ■ Vattenfall ■ Statkraft

Source: Companies' financial reports, UPM

UPM Energy ROCE vs. Nordic peers



UPM Raflatac

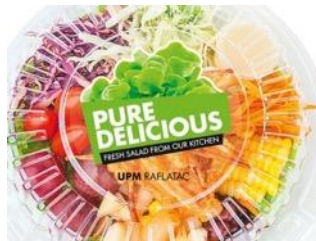
Self-adhesive labels in end-use



PHARMACEUTICALS



**WINE, SPIRITS &
CRAFT BEVERAGE**



FOOD



**HOME & PERSONAL
CARE**



DURABLES



**TRANSPORT &
LOGISTICS**



**RETAIL, OIL &
INDUSTRIAL**



A4 & CUT-SIZE



**SECURITY & BRAND
PROTECTION**



TYRE

The self-adhesive labelstock market



>EUR 8bn global market

~4% p.a. growth

Private consumption driven

Largest of the labelling technologies

~1/5 of total self adhesive materials markets

Strategy for profitable growth



Increased customer reach



Wider product portfolio

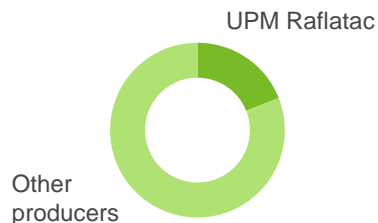


Winning operations

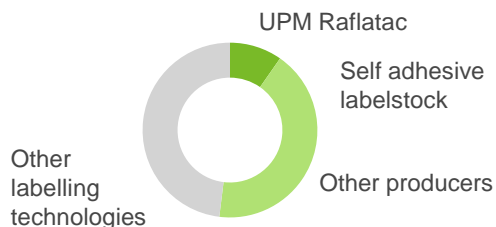
Enabled by strong common capabilities and global operating model

Potentially accelerated with M&A if feasible

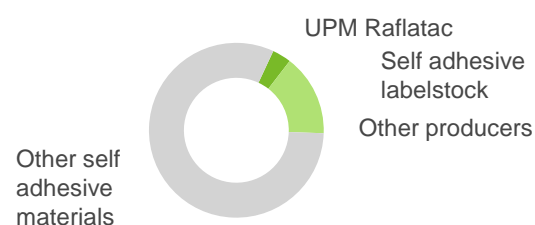
Self-adhesive
labelstock market



All labelling technologies



All self adhesive materials



Focus on global Labelling materials, Packaging in Europe and Office paper in APAC



UPM Specialty Papers

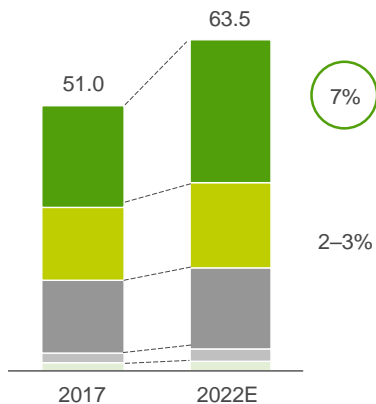
Strong position in growing end use markets



LEADERSHIP POSITION IN LABELLING MATERIALS

CASE: Siliconized release liner market, 51 Bn m²

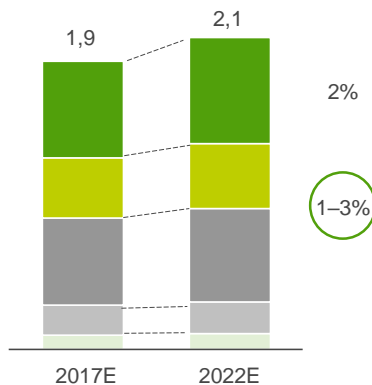
CAGR
5%



NICHE PLAYER IN CONSUMER PACKAGING

Paper flexpack, million tonnes

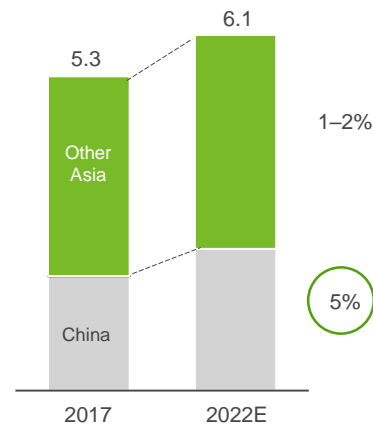
CAGR
2%



MAJOR SUPPLIER OF OFFICE PAPER IN ASIA

Asian cutsize market, million tonnes

CAGR
2-3%



Asia North America Europe South America MEA

Source: AWA; Pira, UPM

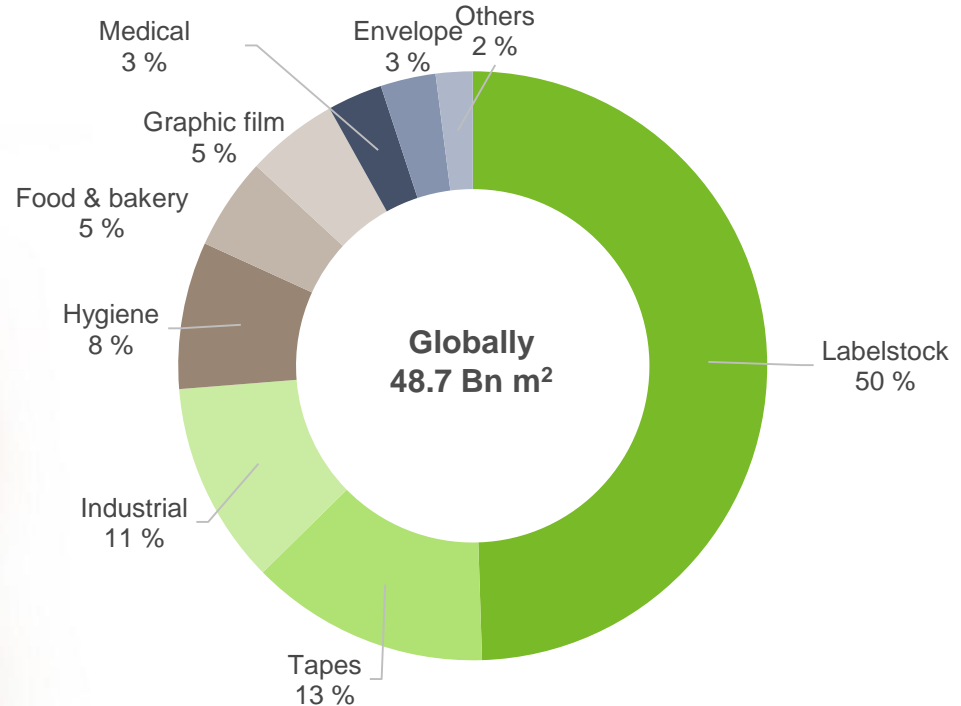
Release liner opportunities in labelstock & other applications



Product functions

Release liner carries the adhesive and face material:

- Prevents the adhesive from sticking permanently
- Important and often critical feature of a layered construction



Source: AWA

Our focus: Strengthen industry leadership role



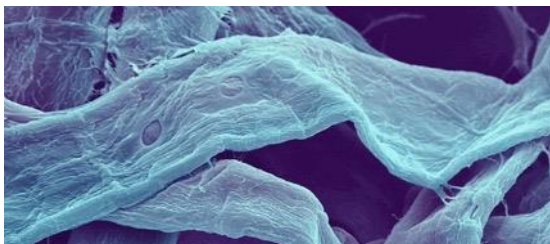
1 Uncompromising performance



Continued focus on stringent capacity management and performance improvement.

Zero accidents

2 Targeted innovation



Targeted investments in innovation to drive performance, increase efficiencies and extend our position in the market.

Leadership

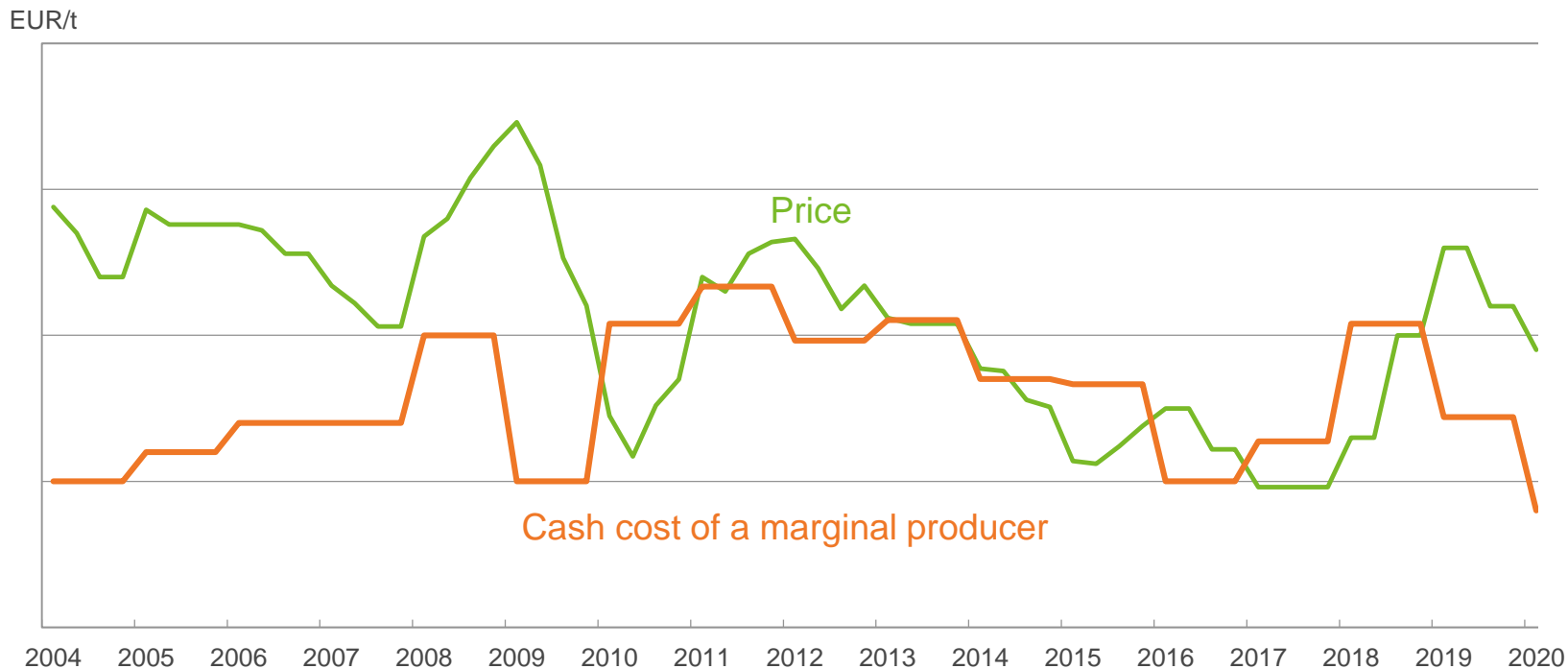
3 Commercial excellence



Optimize and evolve commercial interface and supporting processes to ensure supply security and customer value add.

Focused on sustainability

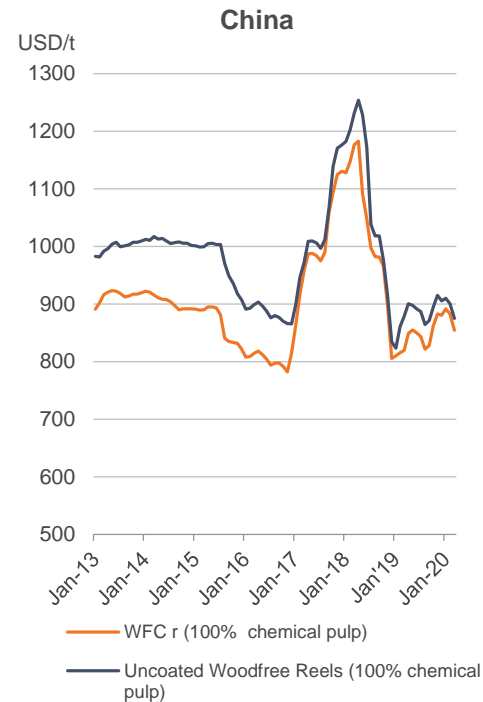
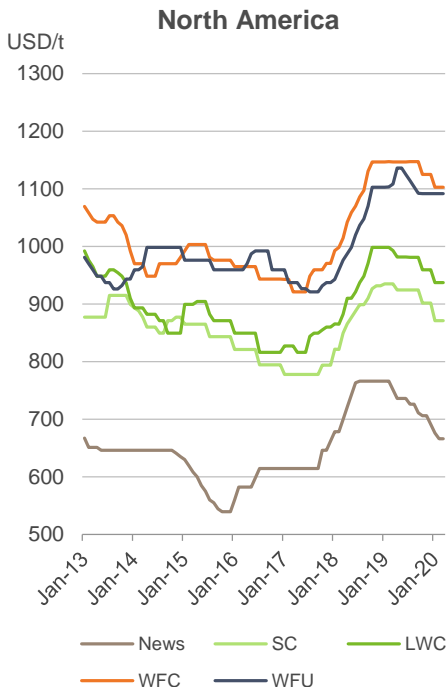
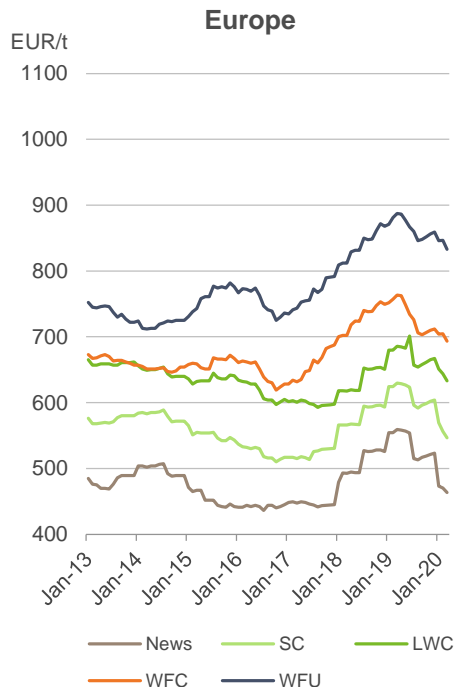
Paper price vs. cash cost of marginal cost producer



Sources: PPI, RISI, Pöyry

UPM Communication Papers

Graphic paper prices



Sources: PPI, RISI

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

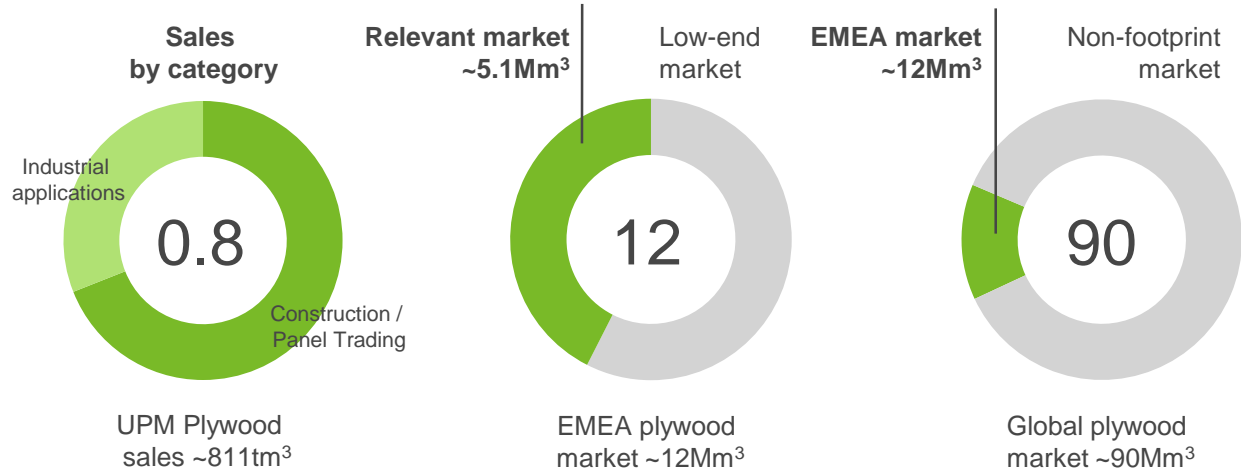
- Global leader in LNG plywood
- Competitive edge based on right quality and accurate on-time deliveries
- Long term commitment and benchmark service level
- Focus to secure leading position in LNG carriers and to extend offering into related applications using the same technologies (e.g. land storage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

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



Strategic choices

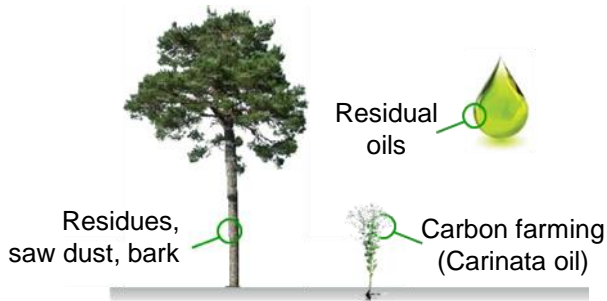
1. Demanding industrial applications
2. High and medium range standard products
3. Selected customers
4. EMEA region and LNG business globally



The possible Kotka Biorefinery: an innovative and robust concept to scale up the business



- ✓ Competitive and sustainable feedstocks



UPM feedstocks



Lappeenranta Biorefinery
130kt



Potential Kotka Biorefinery
500kt

- ✓ Low-carbon fuels for road, aviation and petrochemicals



UPM renewable fuels

- ✓ World-scale biorefinery leveraging **UPM ecosystem**
- ✓ Significant **efficiency gains** enabled by economy of scale and synergies with Lappeenranta

UPM **BIOFORE**
BEYOND FOSSILS

