



UPM Biofore – Beyond fossils

Investor presentation, November 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

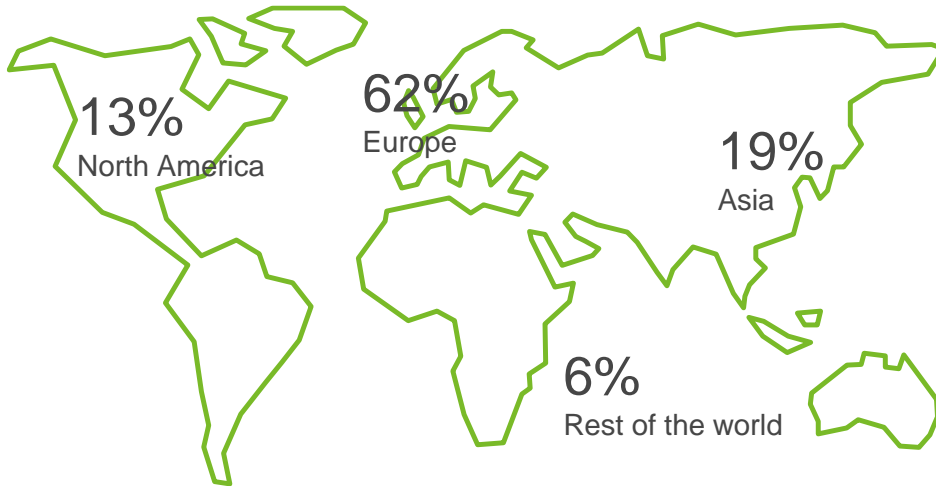
UPM BIOCOMPOSITES

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

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



Driving long-term value creation – UPM's climate commitment



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**



A leader in responsibility – external recognitions



MEMBER OF

**Dow Jones
Sustainability Indices**

In Collaboration with RobecoSAM



Global Compact
LEAD
2020 PARTICIPANT

MSCI
ESG RATINGS



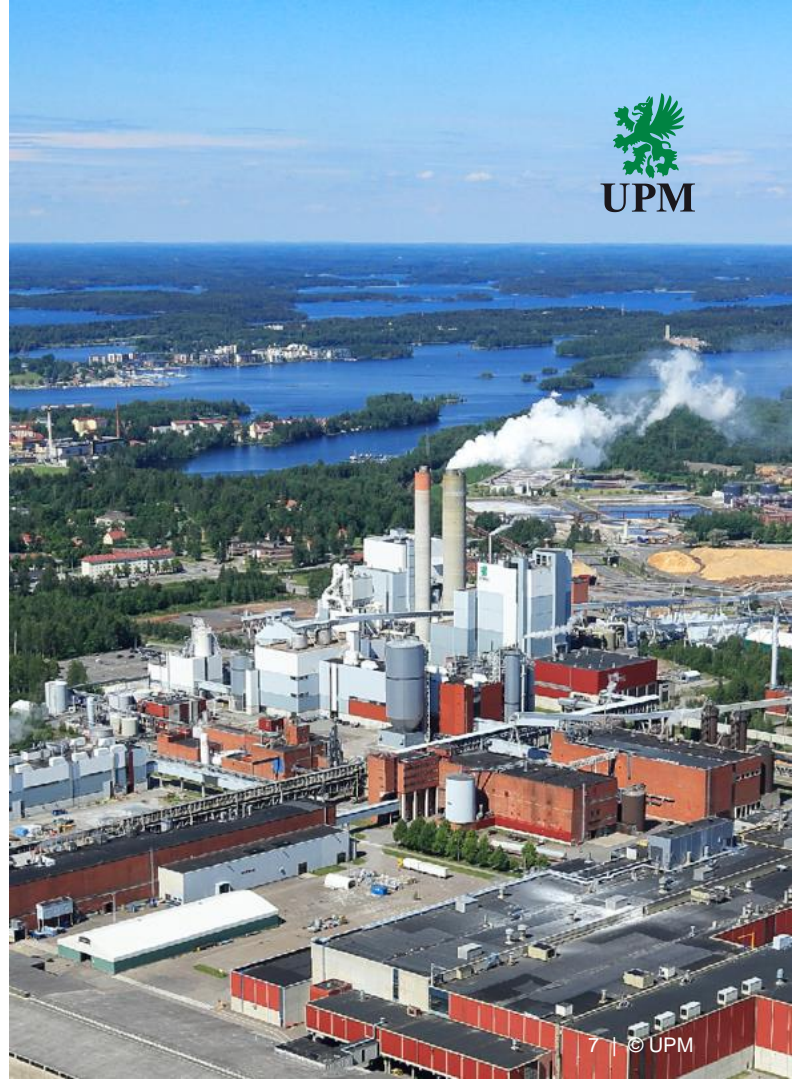
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<https://www.msci.com/documents/1296102/1523388/6/How-to-Reference-an-MSCI-ESG-Rating-Final.pdf>

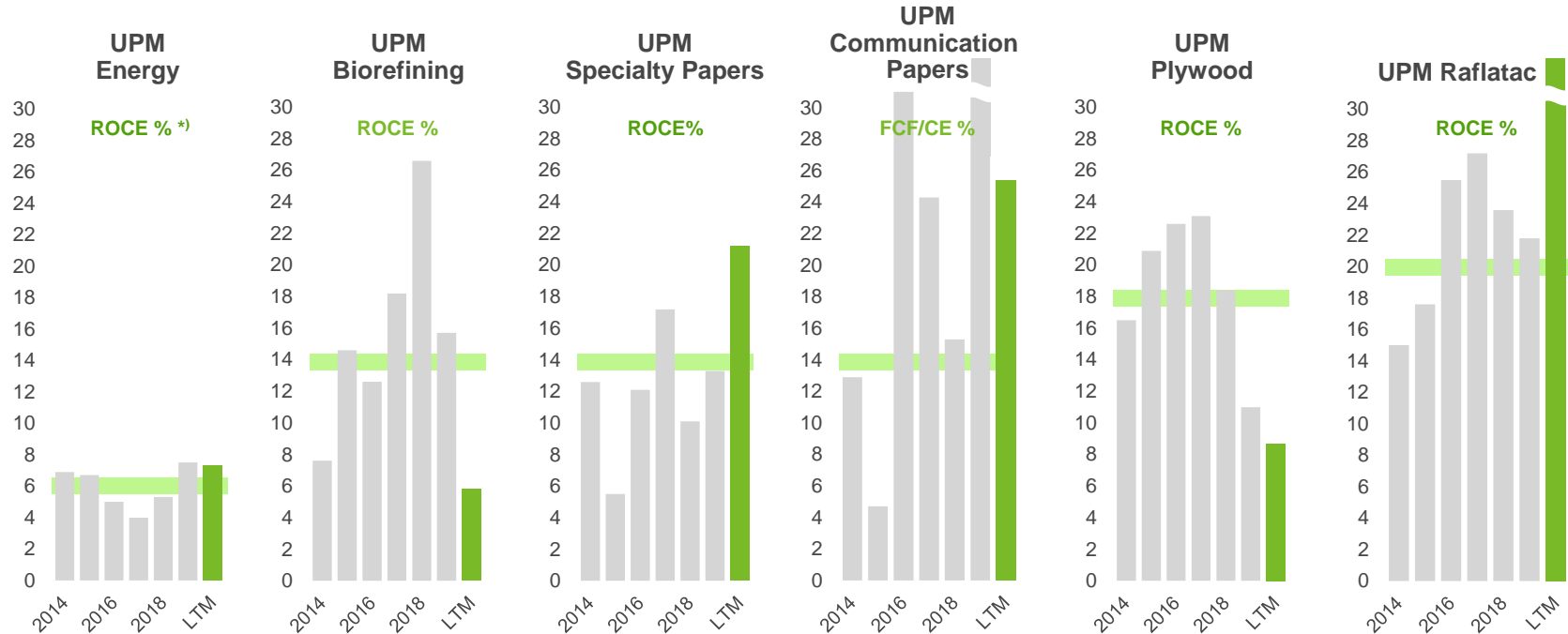


**Sustainability Award
Gold Class 2020**

UPM **BIOFORE-BEYOND** FOSSILS

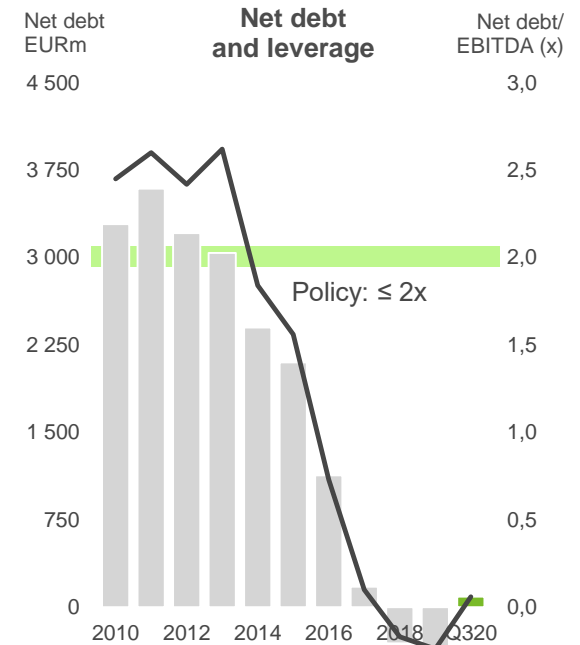
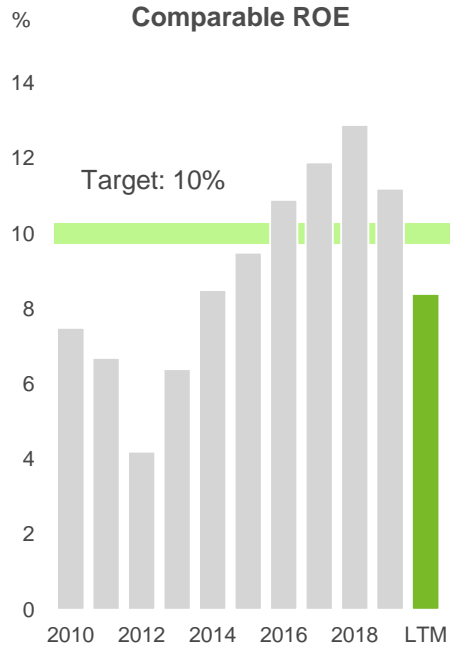
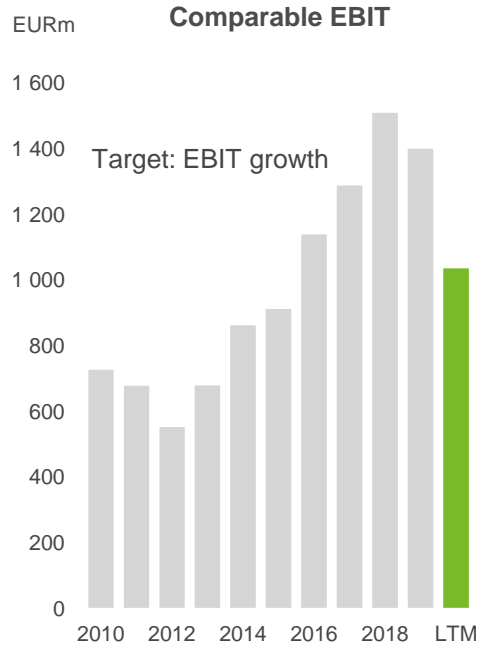


Business area returns and long-term targets

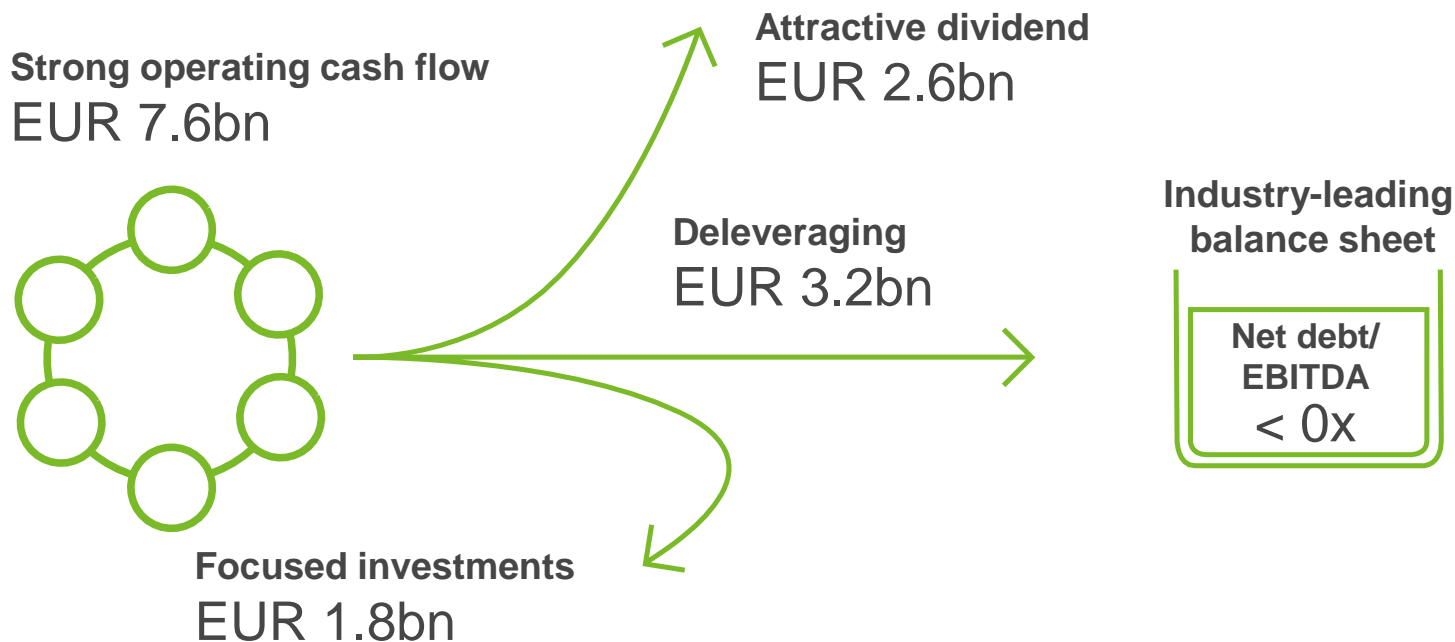


*) shareholdings in UPM Energy
valued at fair value

Group financial performance

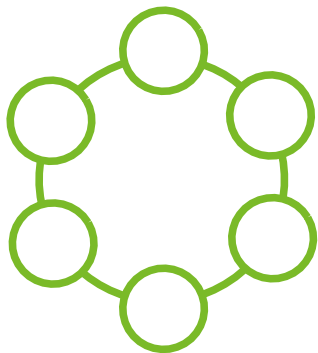


5-year cumulative cash flow (2015–2019) – efficient capital allocation in action



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

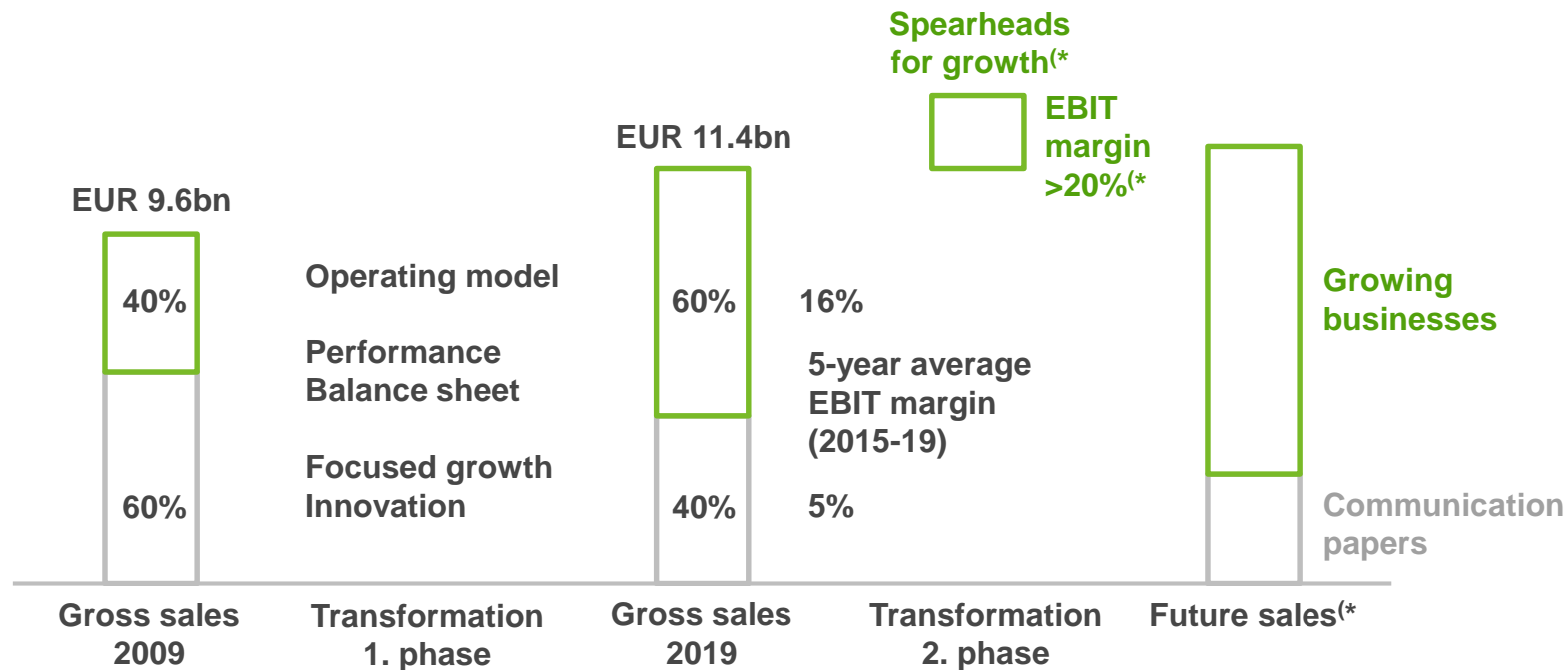
Industry-leading
balance sheet

Net debt/
EBITDA
< 2x

Maintain headroom

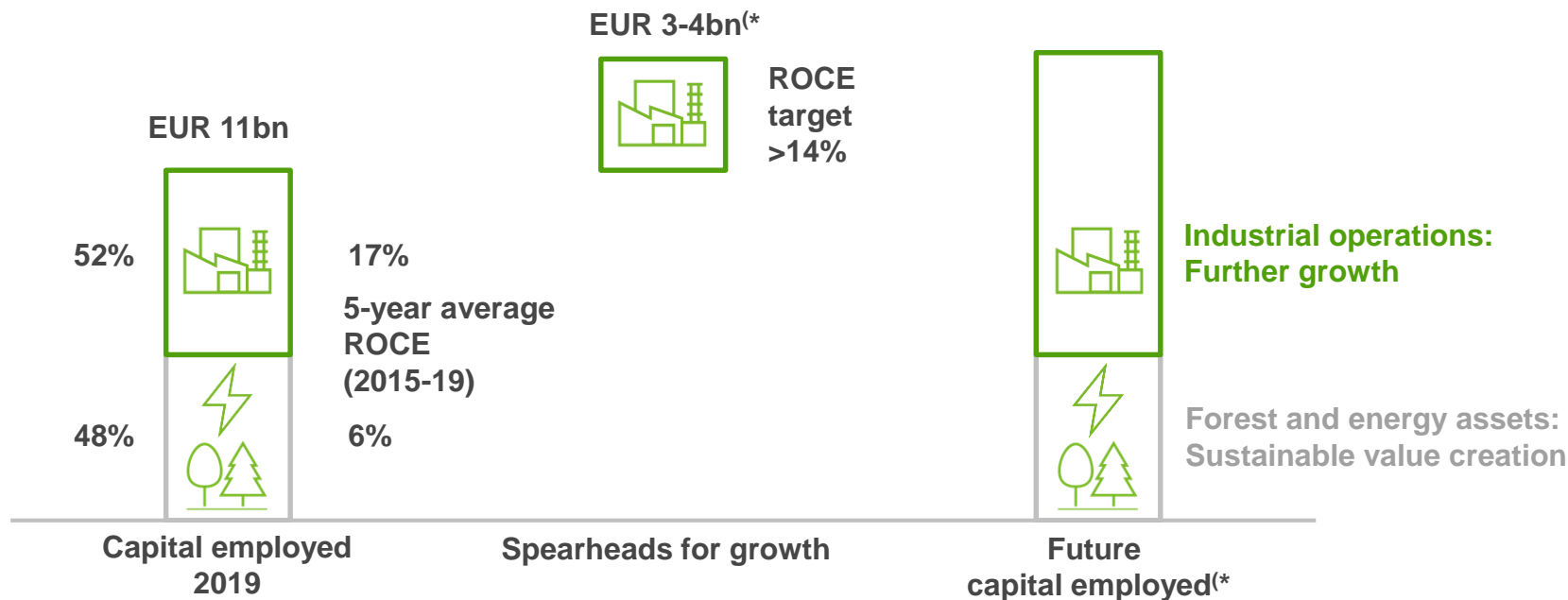
^{*)} This is not a forecast

Spearheads for growth – improving business mix drives earnings, cash flow and shareholder value



^(*) This is an illustration, not a forecast

Transformation improves UPM's asset mix, driving returns

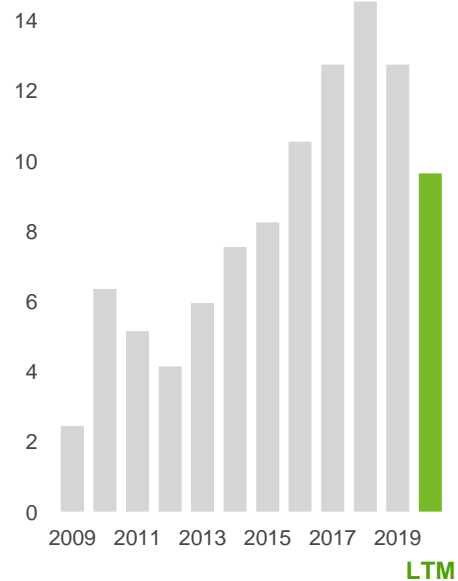


^(*) This is an illustration, not a forecast

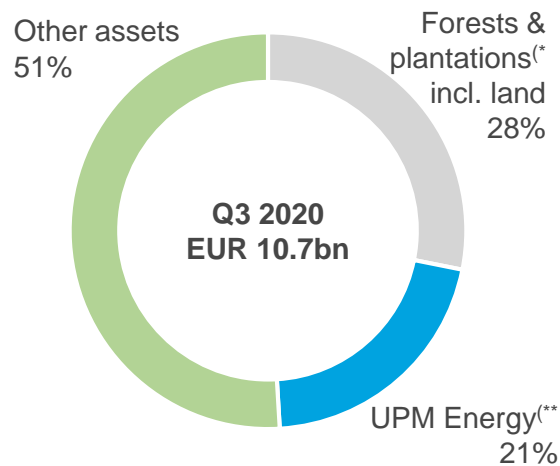
Group returns influenced by forests, plantations, energy assets and debt-free balance sheet



% Comparable ROCE



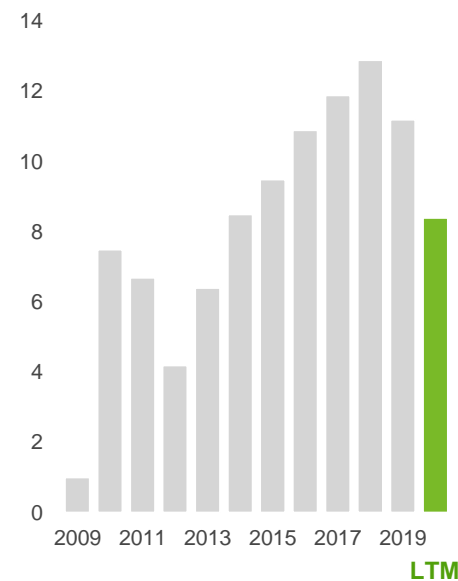
Capital employed



*) growing trees valued at fair value

**) energy shareholdings valued at fair value

% Comparable ROE

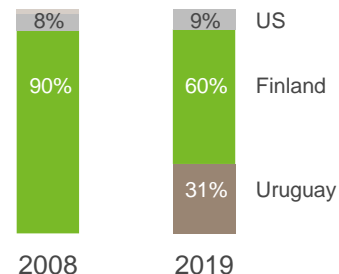


Developing our forest assets

UPM forests and plantations

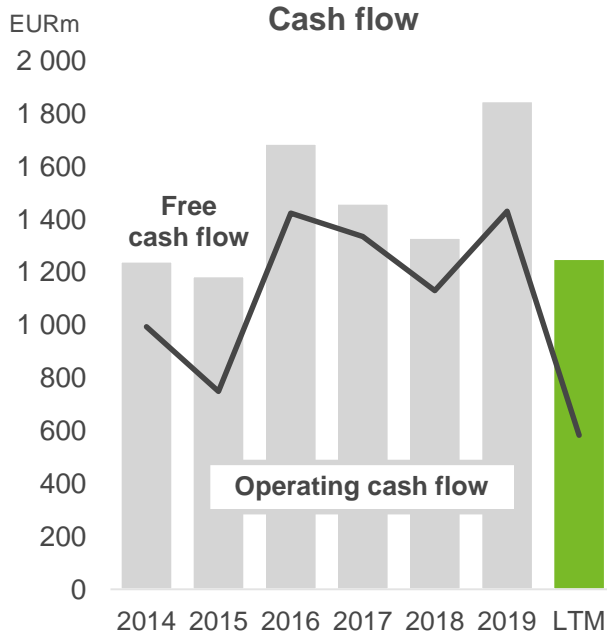
	2008	2019
Forest and plantation land (own and rented) (1,000 ha)	1,012	991
Forest growth (million m ³)	4.3	8.9
Wood sourced from UPM forests and plantations (million m ³)	2.2	3.7
Value of forests and plantations, including land (EURm)	1,270	2,864

Area distribution



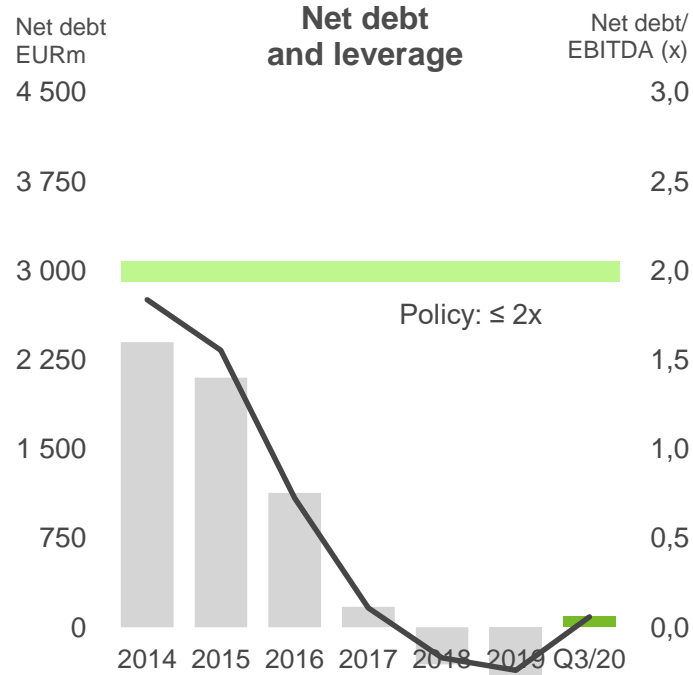
Investing in strategic forest assets in Uruguay
 Releasing capital from forests far from our mills
 Productivity with active management and nurseries
 Strong commitment to sustainability

Robust cash flow



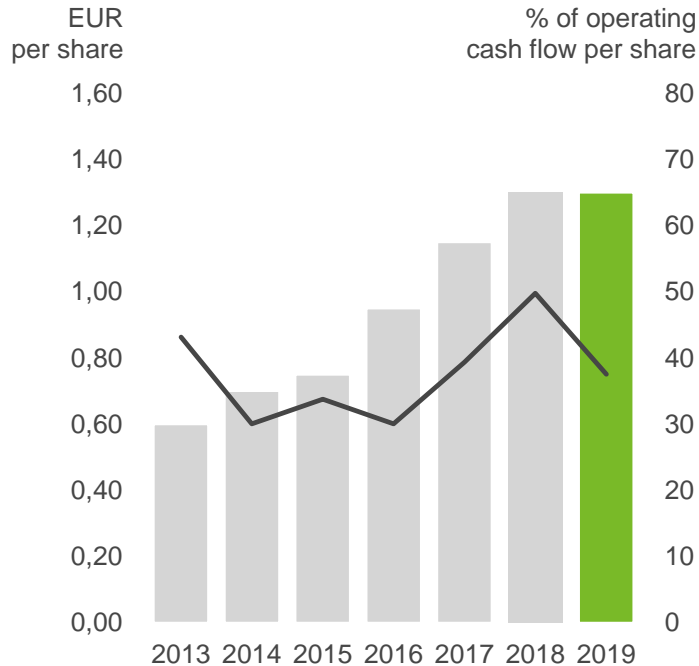
- Q3/20: operating cash flow was EUR 365m (500m in Q3/19)
- Working capital decreased by EUR 122m (decreased by 112m in Q3/19, increased by EUR 75m in Q2/20)

Strong financial position



- Net debt EUR 89m at the end of Q3
- Cash funds and committed credit facilities EUR 2.3bn at the end of Q3
- Includes a EUR 750m sustainability-linked revolving credit facility signed in Q1 and bilateral committed credit facilities totalling EUR 550m signed in Q2
- No financial covenants
- Investment grade ratings
 - Moody's Baa1 Stable outlook
 - S&P BBB Stable outlook

Dividend for 2019: EUR 1.30 per share



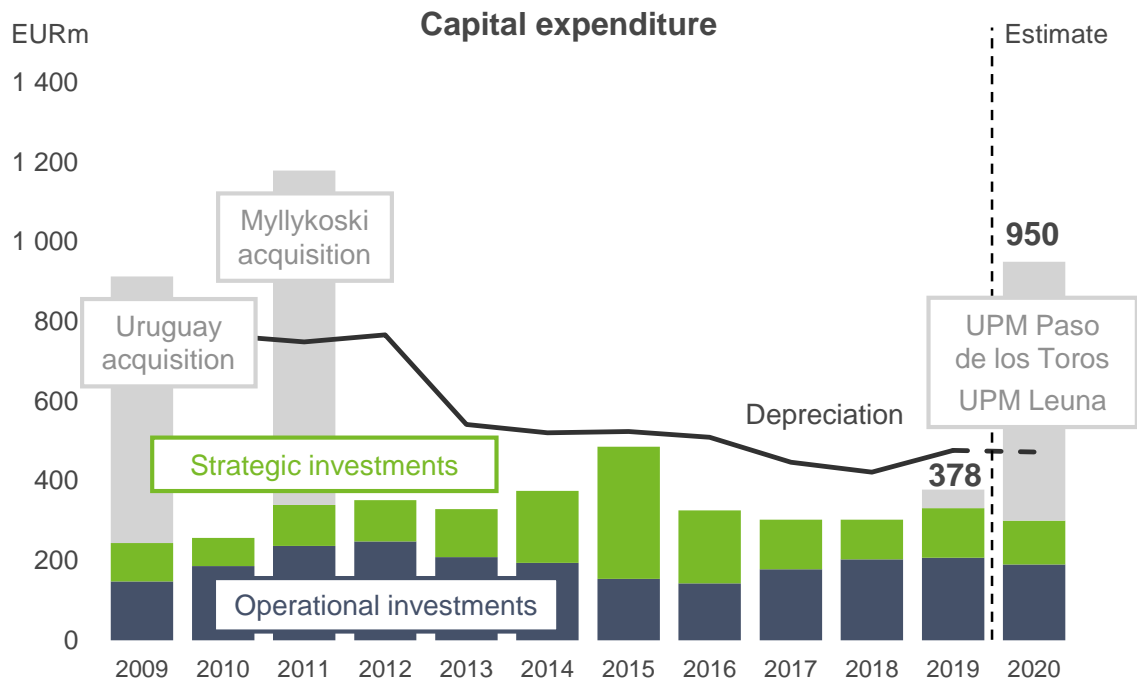
Long term dividend policy

- 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

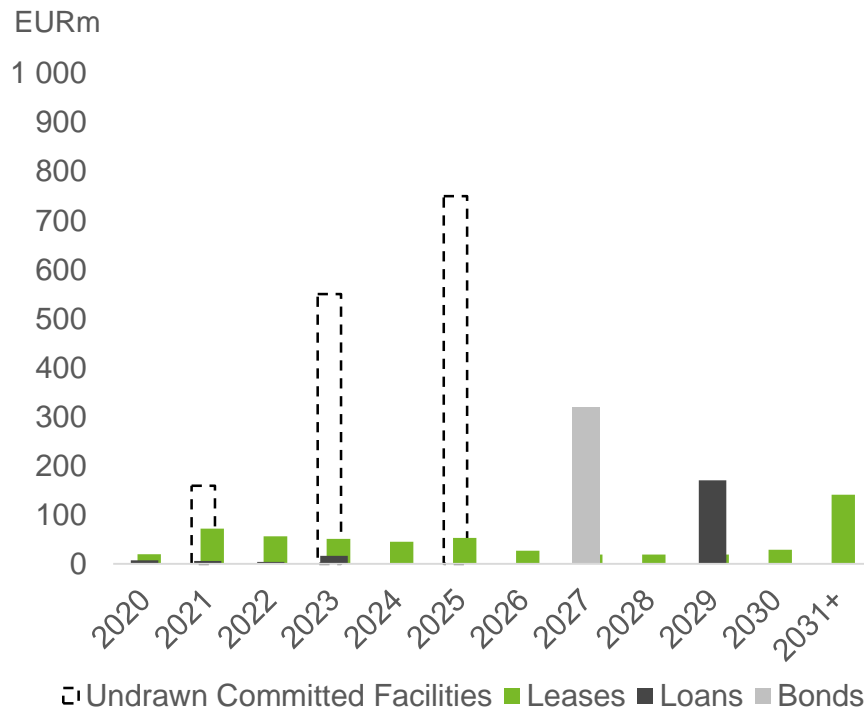
Transformative growth projects in pulp and biochemicals, low operational investment needs



Capex estimate for 2020

- Total EUR 950m
- Includes EUR 650m on the transformative growth projects, pulp in Uruguay and biochemicals in Germany
- Operational investment needs consistently low

Maturity profile and liquidity



Liquidity on 30 September 2020 was
EUR 2.3bn (cash and unused credit facilities)

UPM's committed facilities:

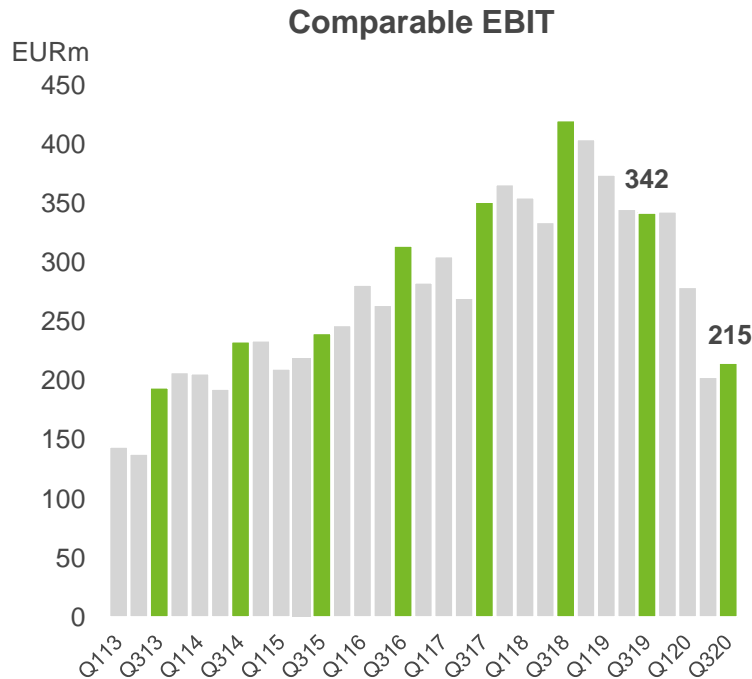
- EUR 159m rolling credit facility maturing 2021
- EUR 550m bilateral facilities maturing 2023
- EUR 750m syndicated facility maturing 2025

No financial covenants

Q3 2020: driving performance and transformative projects under highly exceptional circumstances

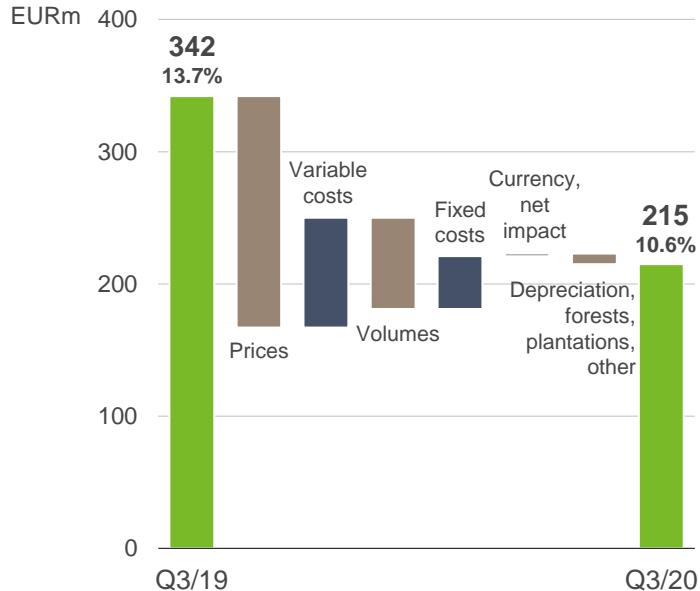


- Sales decreased by 19% to EUR 2,028m (2,493m in Q3 2019)
- Comparable EBIT was EUR 215m, 10.6% of sales, down 37% from last year (342m)
- Uninterrupted business operations and progress in transformative growth projects
- Some normalization of the COVID-19-related demand impacts, both positive and negative
- Closures of UPM Chappelle paper mill and UPM Jyväskylä plywood mill
- Announced the closure of UPM Kaipola paper mill, plans for selling UPM Shotton, streamlining

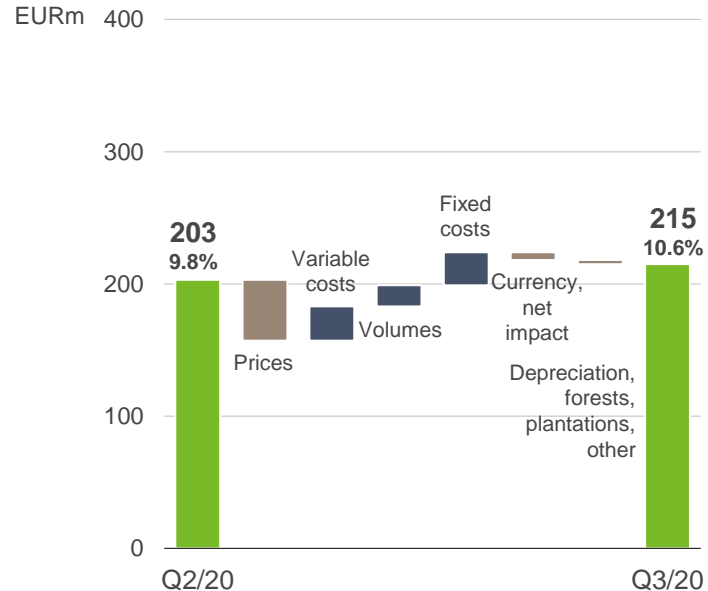


Comparable EBIT in Q3 2020

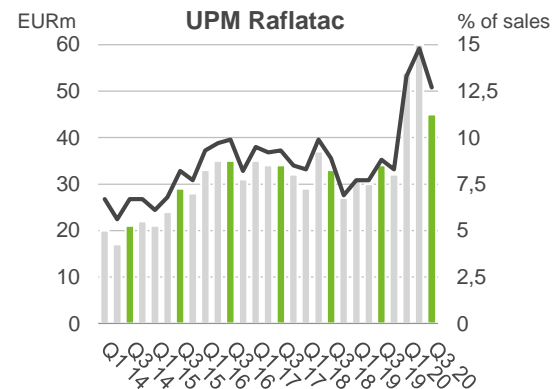
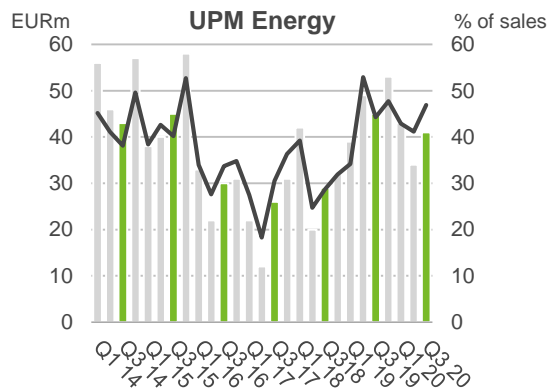
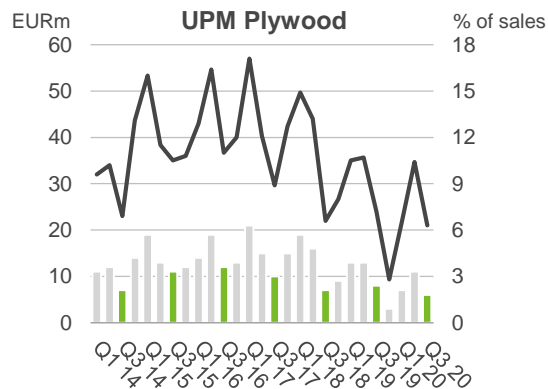
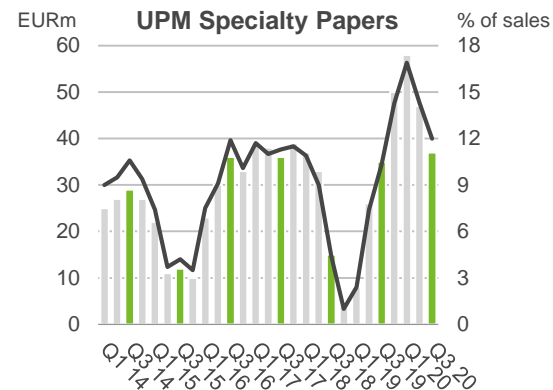
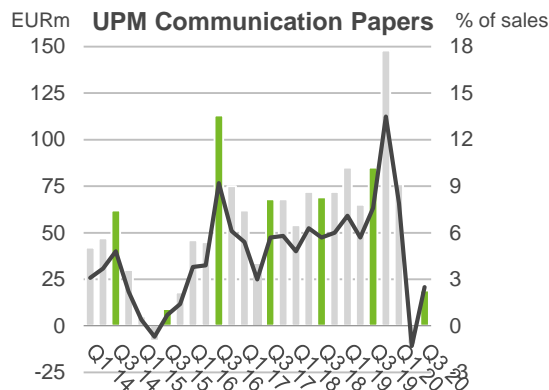
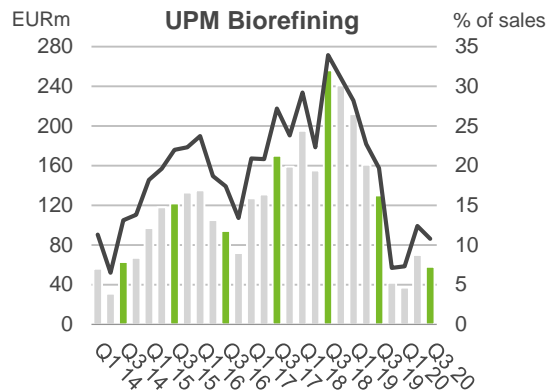
Sales prices decreased, clearly outweighing the impact of lower variable costs. Graphic paper deliveries were lower. Fixed costs decreased.



Sales prices decreased.
Variable and fixed costs were lower.
Graphic paper deliveries increased.



Comparable EBIT by business area



Outlook for 2020



The COVID-19 pandemic, the related containment measures and the economic downturn continue to cause high uncertainty for H2 2020.

The COVID-19-lockdowns had a significant negative impact on graphic paper demand. The lockdowns also supported the strong demand for self-adhesive labelling materials and specialty papers in H1 2020. In Q3 2020 there was some normalization of these demand impacts, both positive and negative. However, the development going forward remains uncertain and is likely to be gradual, depending on the pandemic, the related lockdowns and changes in consumer reactions.

Demand for most UPM products is influenced by overall economic activity and hence, also depends on the shape and rate of the economic recovery.

In Q4 there will be significantly more maintenance activity than in the earlier quarters of 2020, as two pulp mill maintenance shutdowns were rescheduled from Q2 2020 to Q4 2020.

UPM will continue to implement measures to decrease fixed and variable costs.

UPM's comparable EBIT is expected to be significantly lower in 2020 than in 2019.

Taking action to ensure performance – expected annual cost savings of approx. EUR 130 million



- UPM Jyväskylä (plywood)
closed in Q3 2020
 - UPM Chapelle (newsprint)
-240kt, closed in Q3 2020
 - UPM Kaipola (newsprint, LWC)
-720kt, to be closed in Q4 2020
 - UPM Shotton (newsprint)
-250kt, planned sale
 - Planned streamlining and cost efficiency actions in UPM Biorefining, UPM Specialty Papers, UPM Raflatac and global functions
-
- Growth investment: UPM Nordland PM2 (fine)
-200kt, conversion to release liner in Q1 2020



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

UPM invests in a world class pulp mill in Uruguay



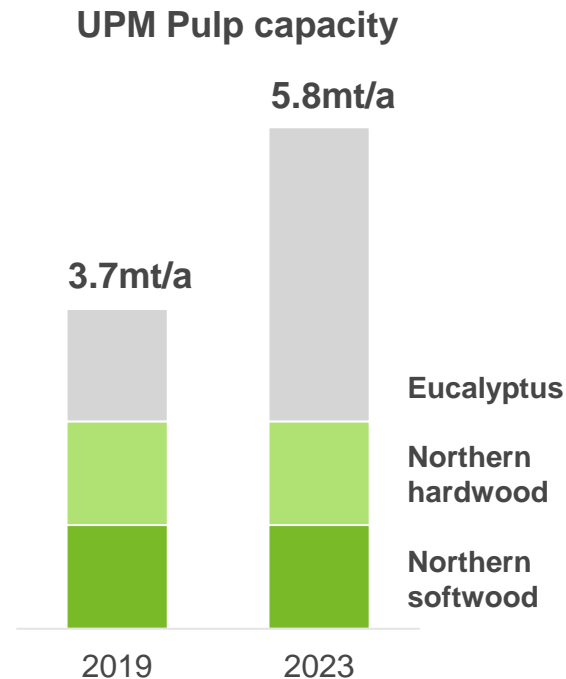
- A highly competitive new pulp mill with annual production capacity of 2.1 million tonnes of eucalyptus pulp
- Mill investment of USD 2.7 billion
- Investments in port operations in Montevideo, local facilities in Paso de los Toros of USD 350 million
- Scheduled start-up in H2 2022
- Industry-leading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



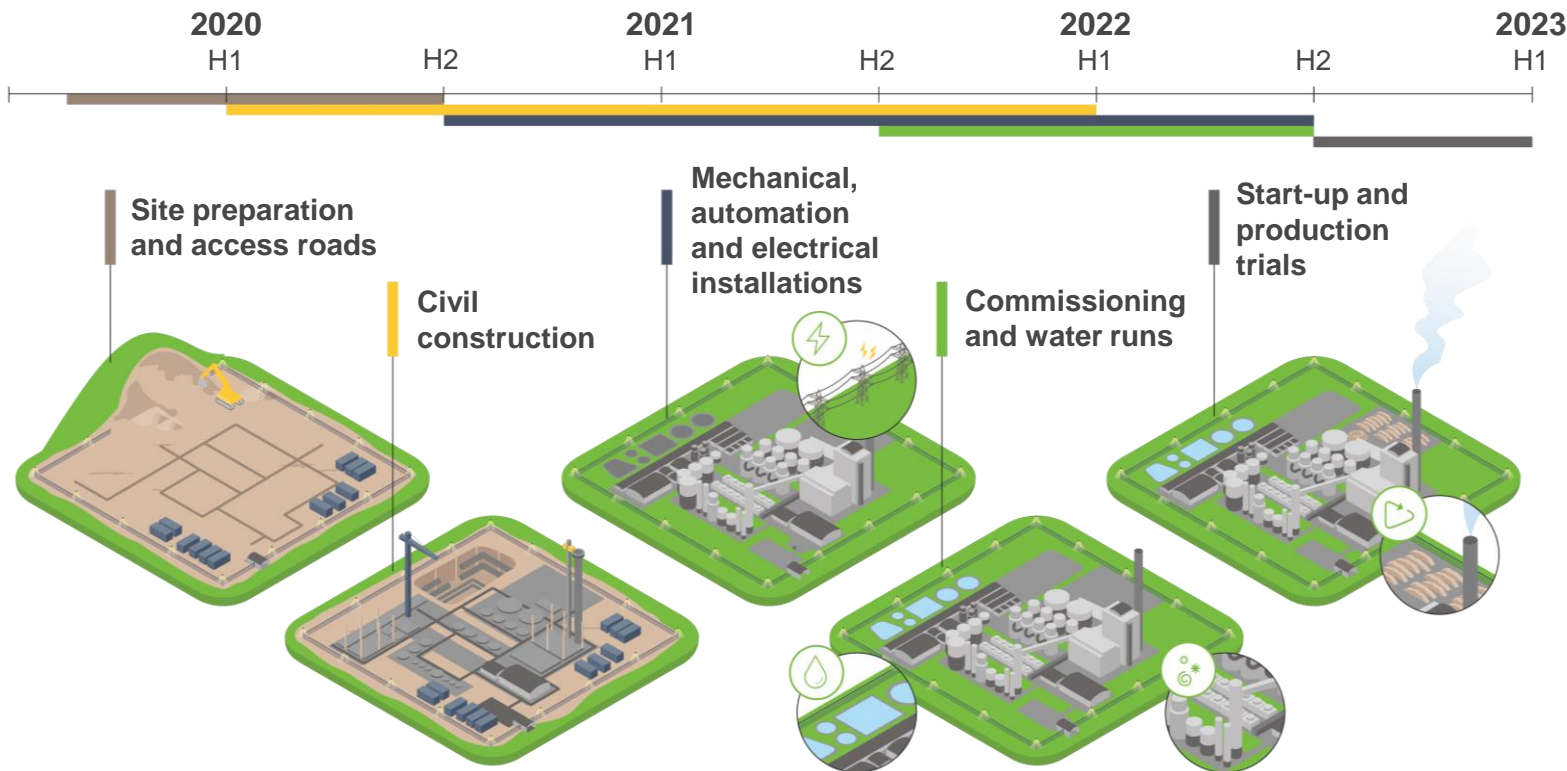
Transformative step in UPM's pulp business and in UPM's future earnings



- 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



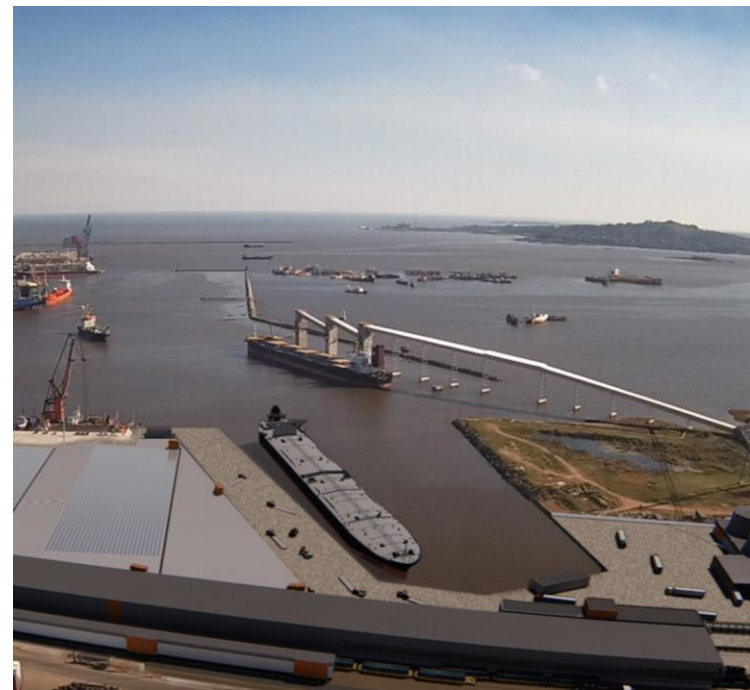
- Eucalyptus availability secured through UPM's own and leased plantations and wood sourcing agreements with private partners
- UPM's own and leased plantations in Uruguay cover 424,000 hectares, supplying both UPM Fray Bentos and the new mill near Paso de los Toros
- 30 years experience of sustainably managed and productive plantations



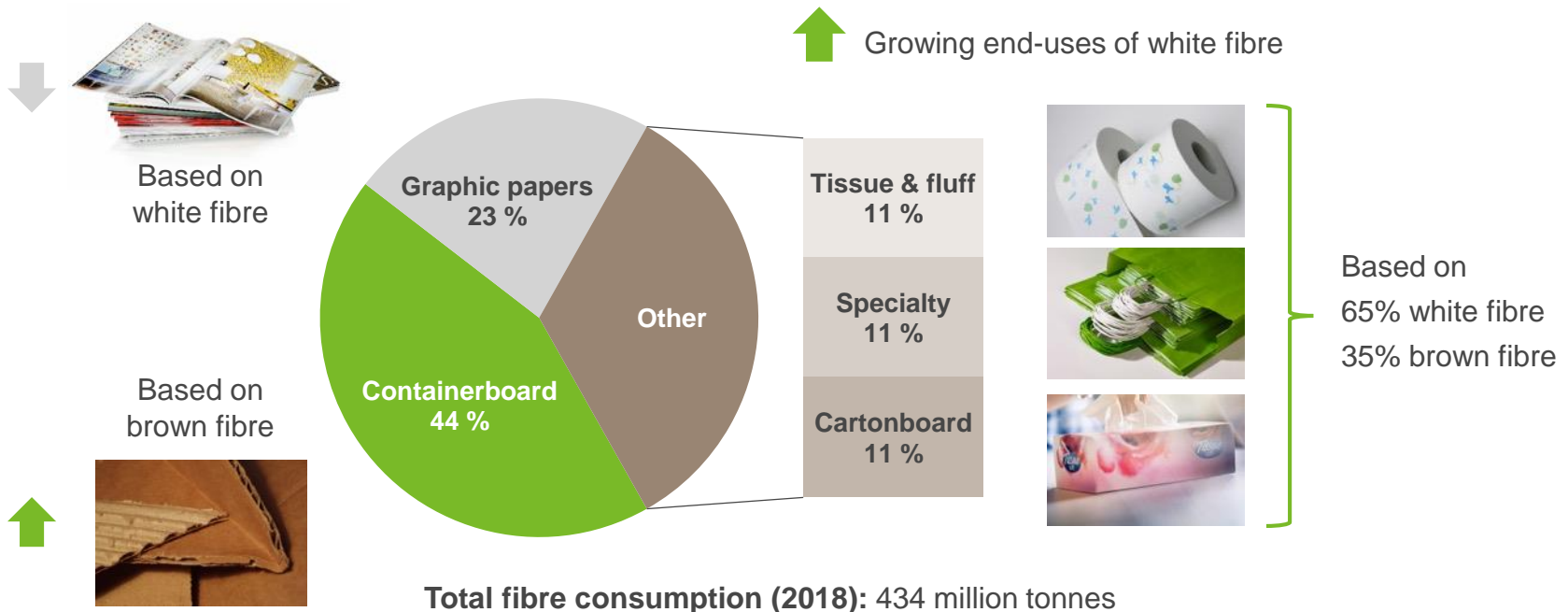
Efficient logistics set-up



- 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

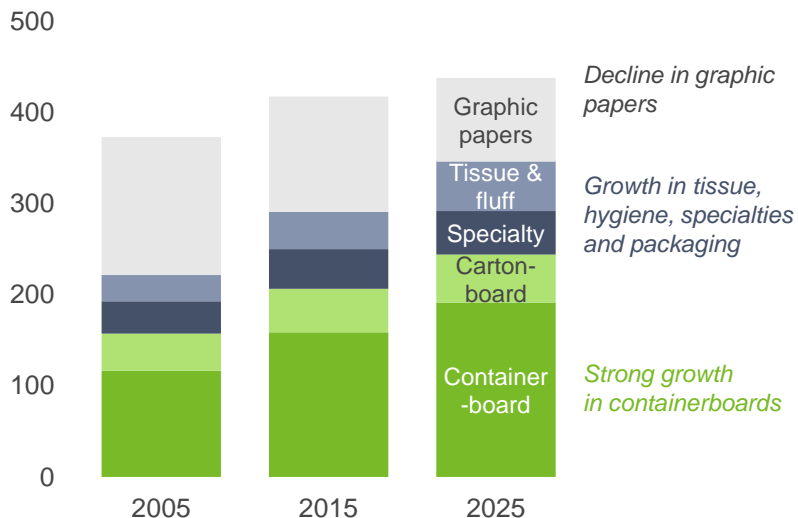


UPM Biorefining

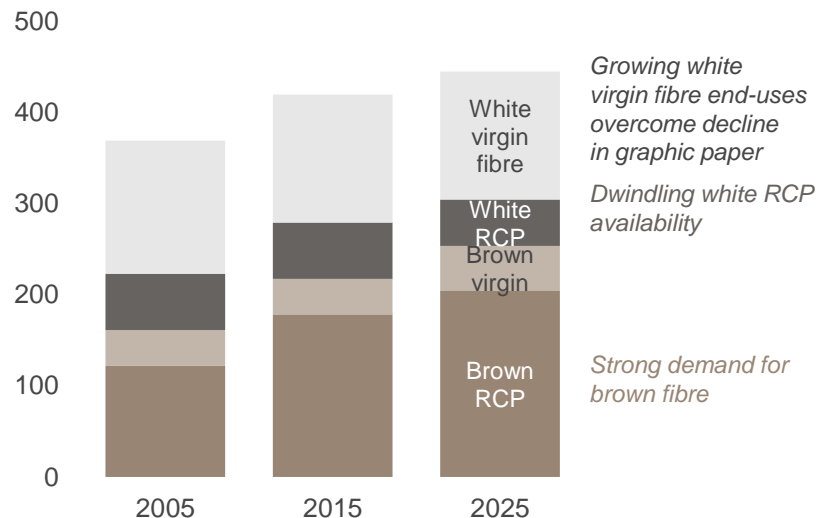
Pulp demand outlook



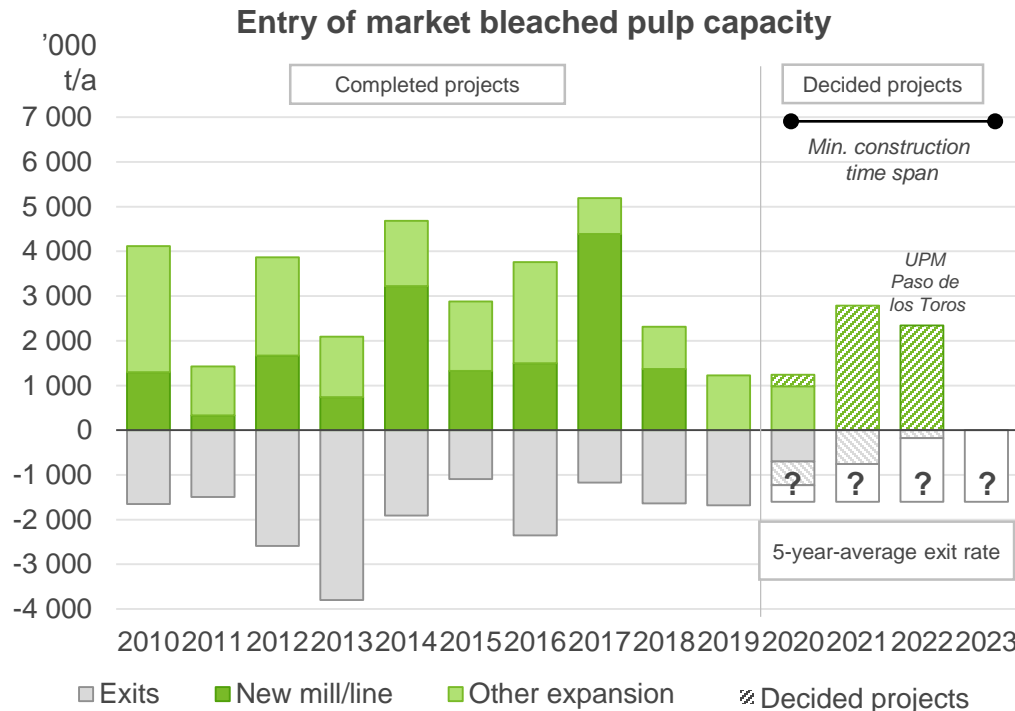
Global consumption of end-uses
in million tonnes



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: bleached chemical wood pulp including fluff pulp, excluding dissolving pulp

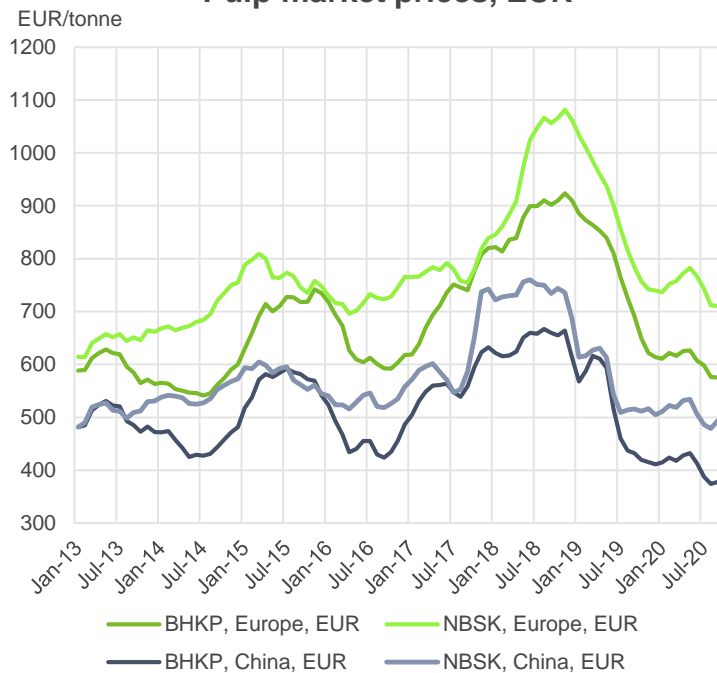
Sources: Afry, UPM

UPM Biorefining

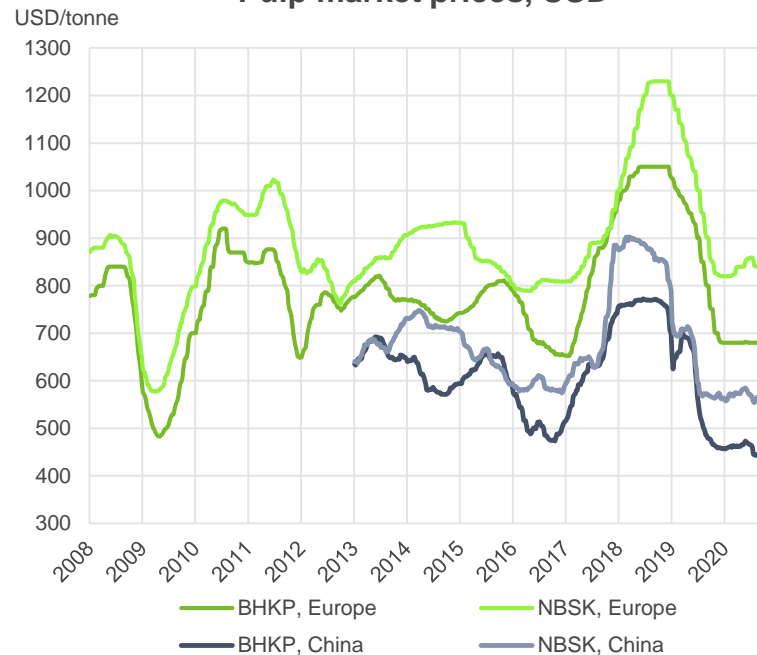
Chemical pulp market prices



Pulp market prices, EUR



Pulp market prices, USD

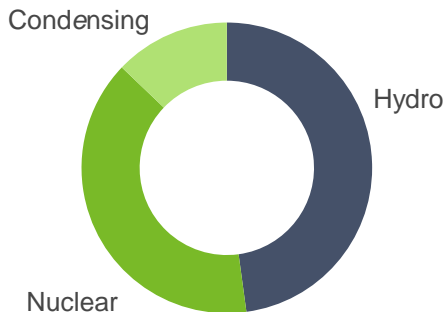


Source: FOEX Indexes Ltd

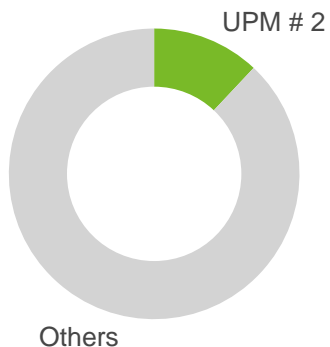
UPM's power generation – competitive in all market conditions



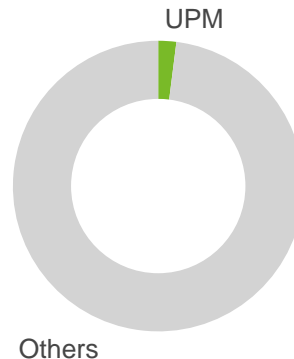
UPM's power
generation assets



UPM in Finland



UPM in Nordics

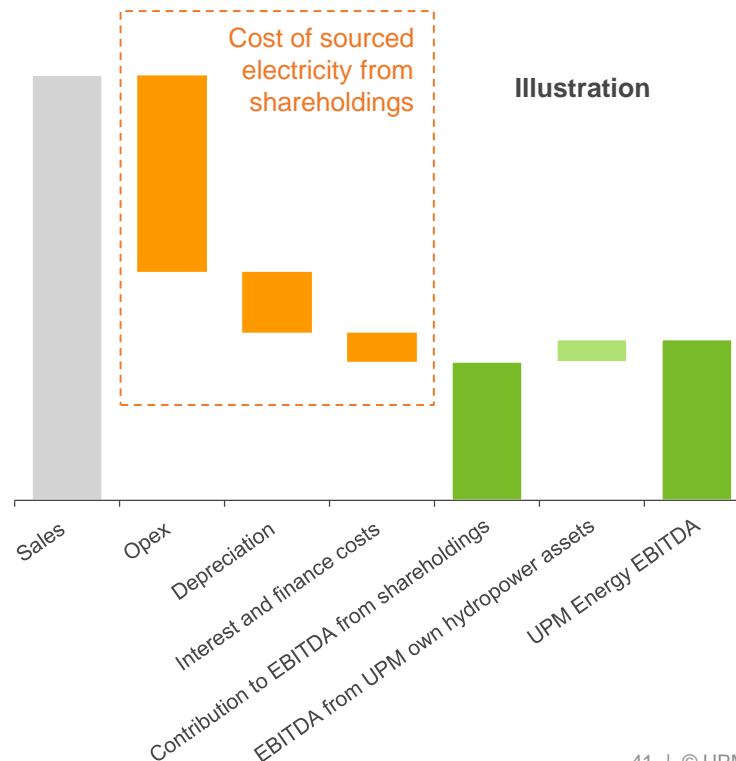


UPM Energy

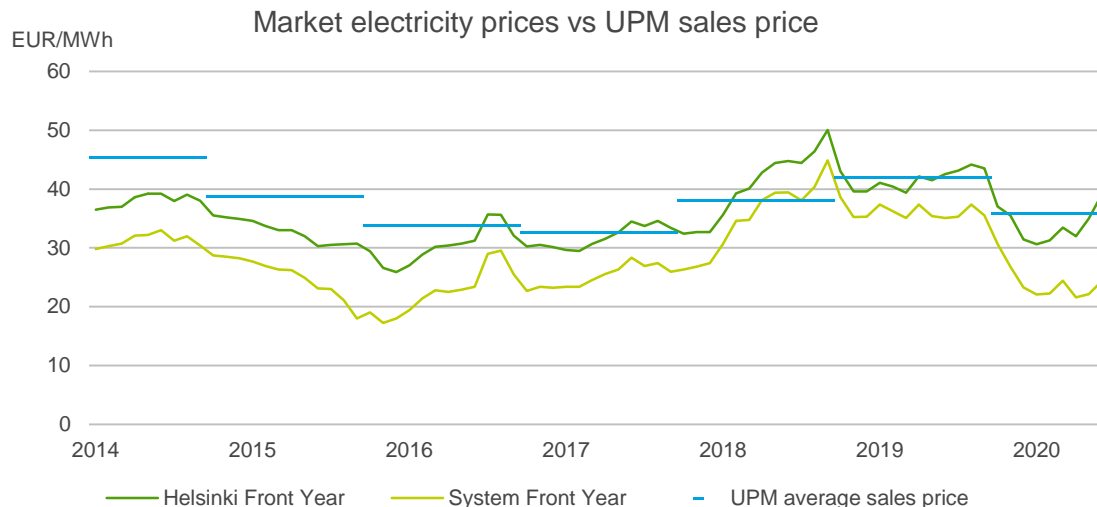


UPM Energy's power generation	MW	EURm
Hydropower holdings	549	748
Nuclear power OL1 and OL2	588	1,145
Nuclear power OL3 under construction	(494)	189
Condensing power	95	1
UPM Energy's shareholdings in total, valued at fair value	1,232	2,082
UPM own hydropower assets	166	
UPM Energy's in total (excl. 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-Q3/2020
Comparable EBIT, EURm	181	116	91	123	185	119
% of sales	43.6	32.7	28.8	31.5	44.4	43.7

UPM Raflatac

Self-adhesive labels in end-use



Pharmaceuticals



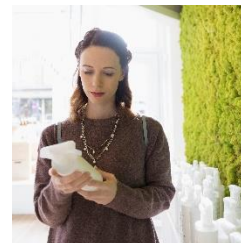
Wine, spirits & craft beverage



Food



Personal care



Home care



Durables



Transport & logistics



Industrial Chemical



Retail



A4 & cut-size



Security & brand protection



Tyre

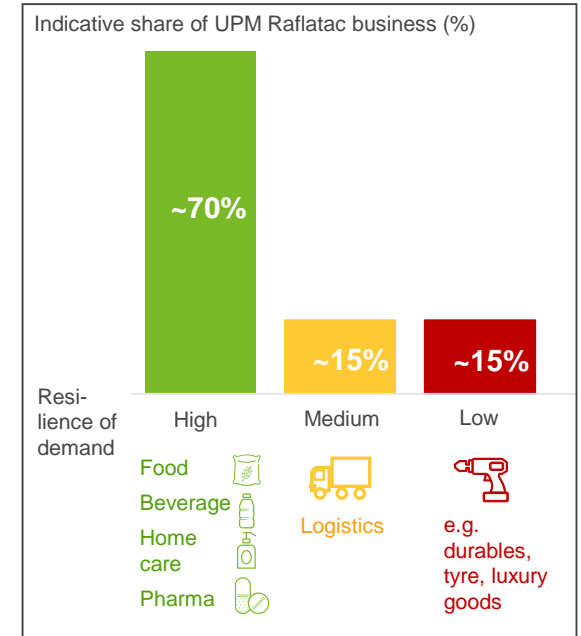
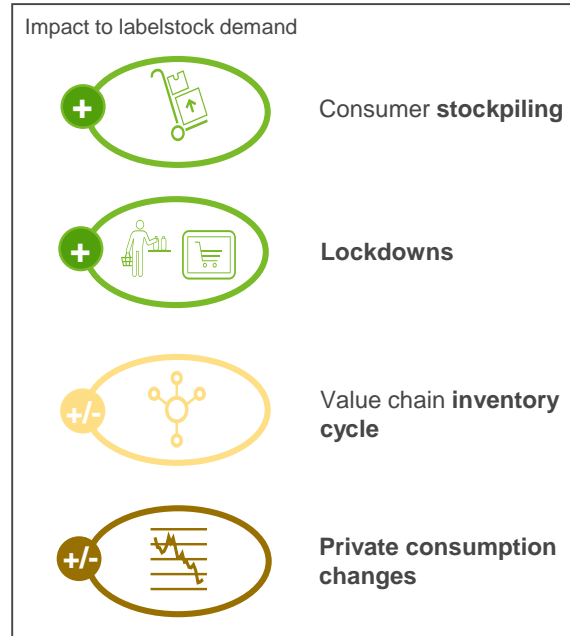
The labelstock markets have solid long term demand growth trends – short term can be more volatile



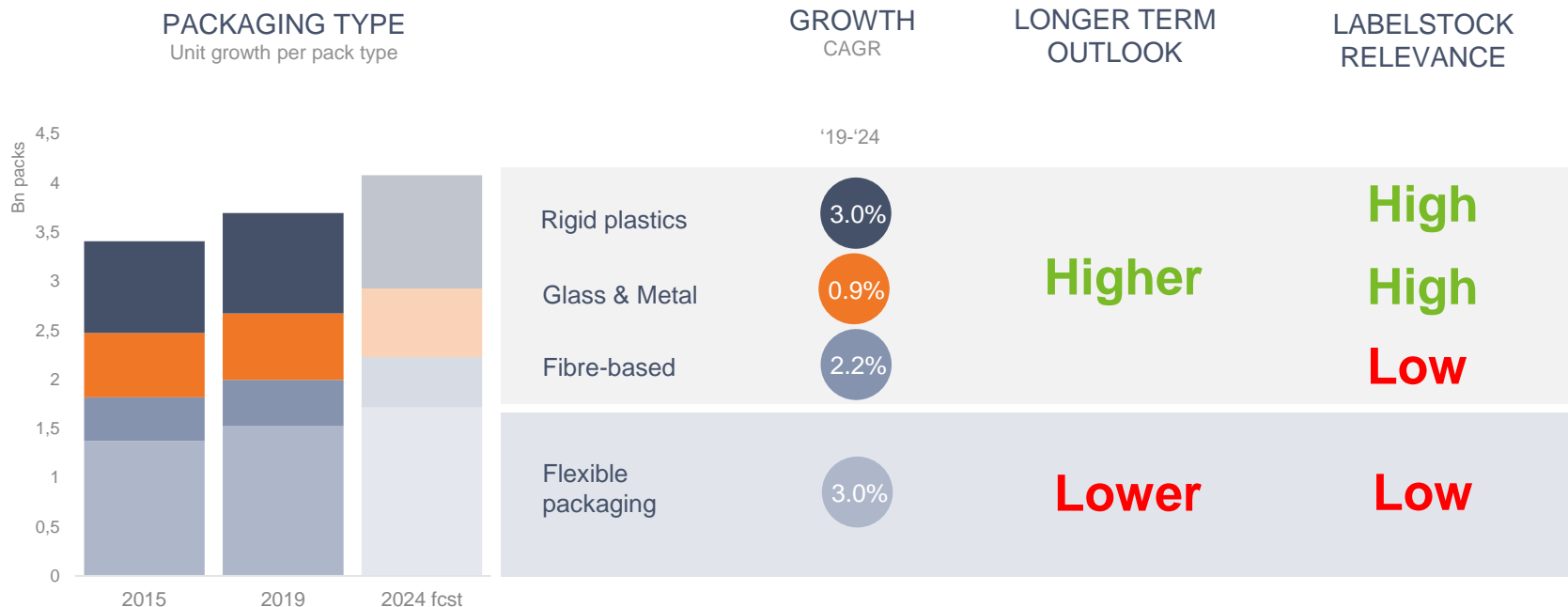
The long term demand growth outlook remains a solid 3-4% p.a.

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

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



Early signs of recycling impacts: Packaging decisions to favour labelstock



Source: Euromonitor September 2020; UPM Raflatrac perspective

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



UPM Specialty Papers is well positioned for growth in the selected markets



LABEL & RELEASE

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



Market growth forecast, CAGR 2020-2025

Global
release liner
3-4%

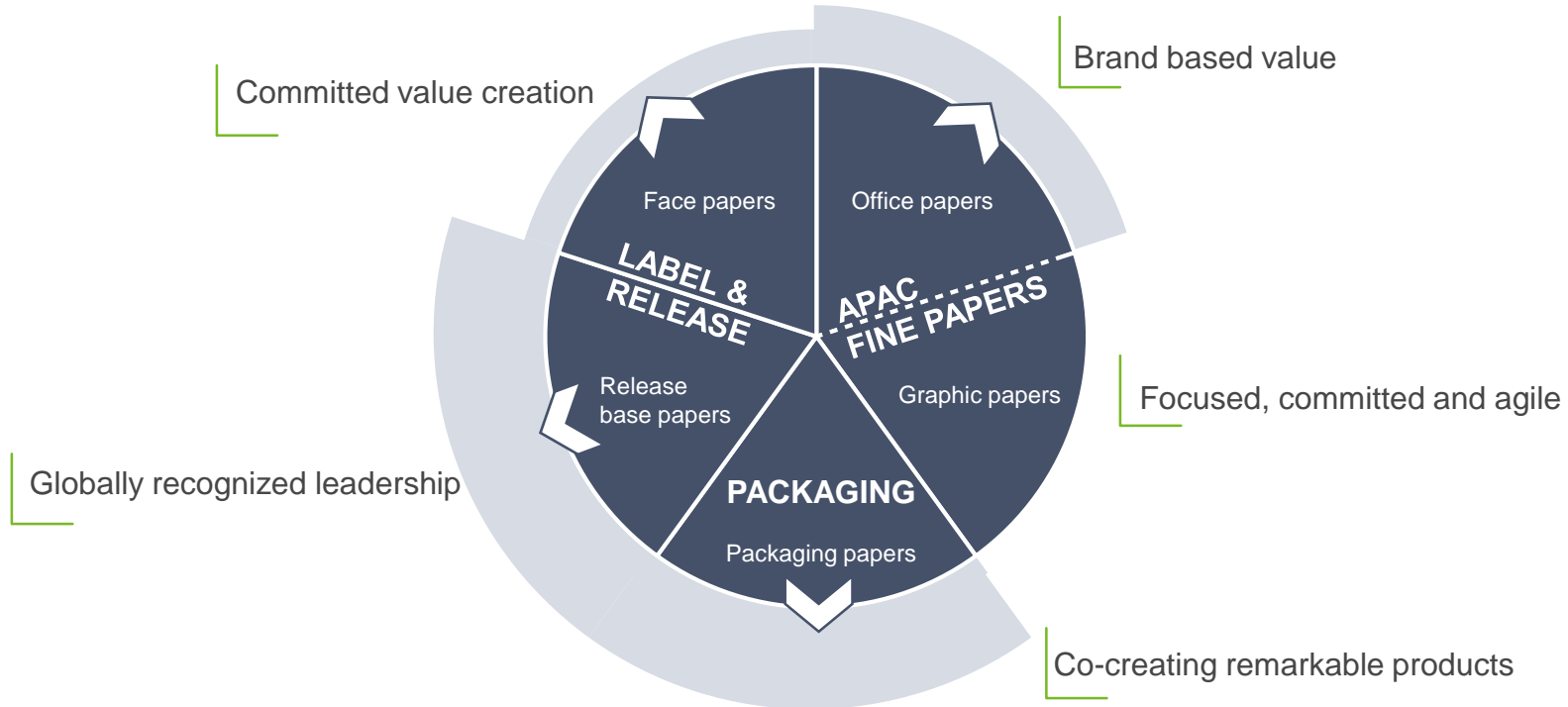
Global
flexible
packaging
2-4%



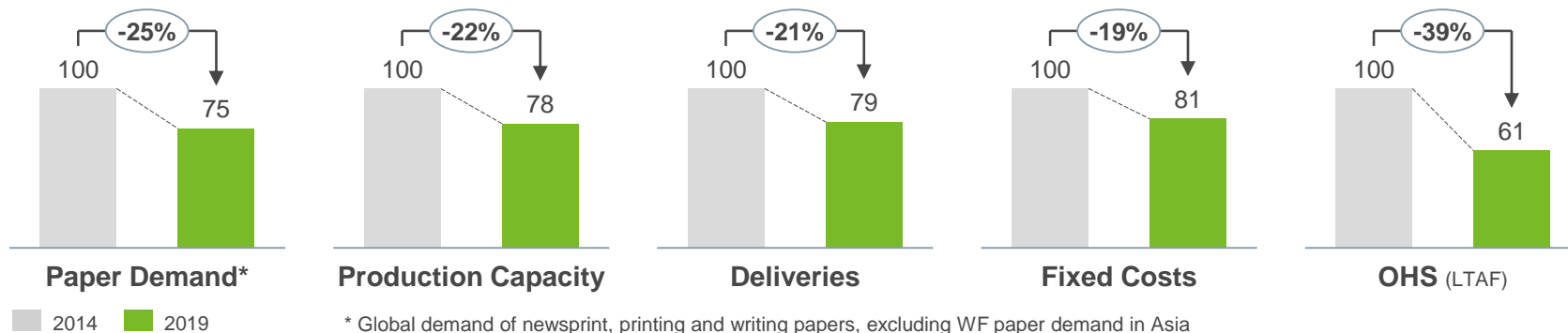
APAC office
papers
1-2%

UPM Specialty Papers **GROWTH STRATEGY**

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



We have continued to deliver according to our strategy with uncompromising cost competitiveness



... building the basis for continued profitable performance

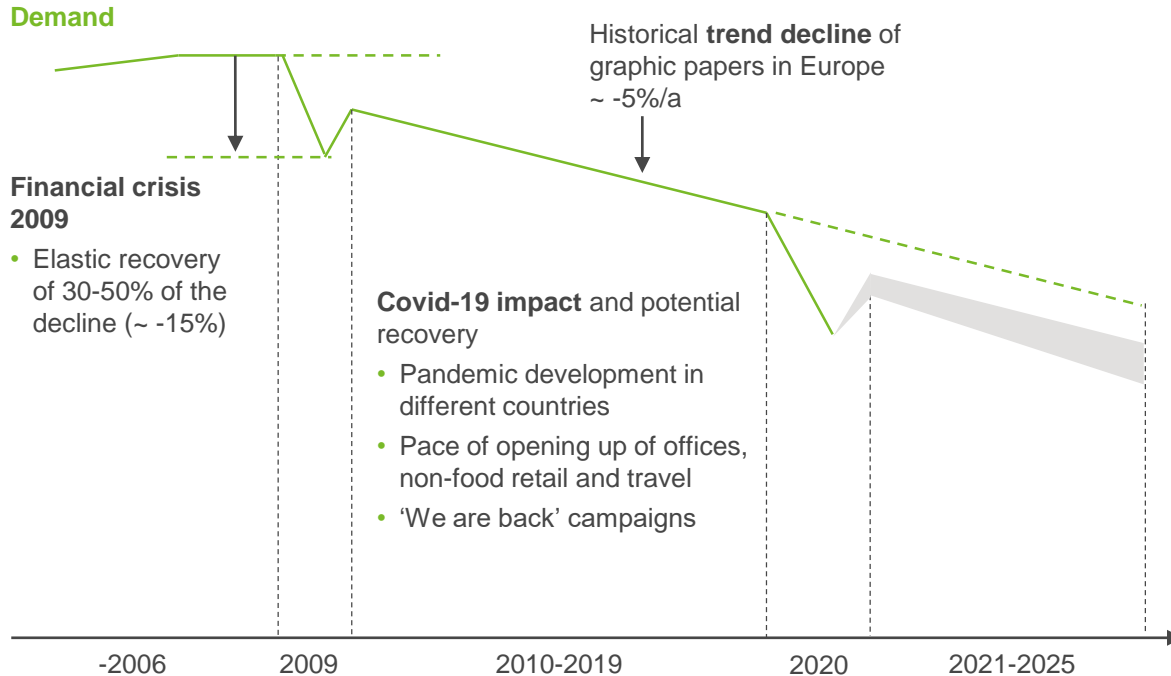
- ✓ Efficient and modern assets & high asset utilization
- ✓ Tight grip on costs
- ✓ Broad product portfolio
- ✓ Strong geographical footprint
- ✓ Commercial focus

5-year (2015-19)
cumulative free cash flow

EUR 1.9bn

Source: Internal calculation and analyses based on data from Euro-Graph, PPPC, AFRY

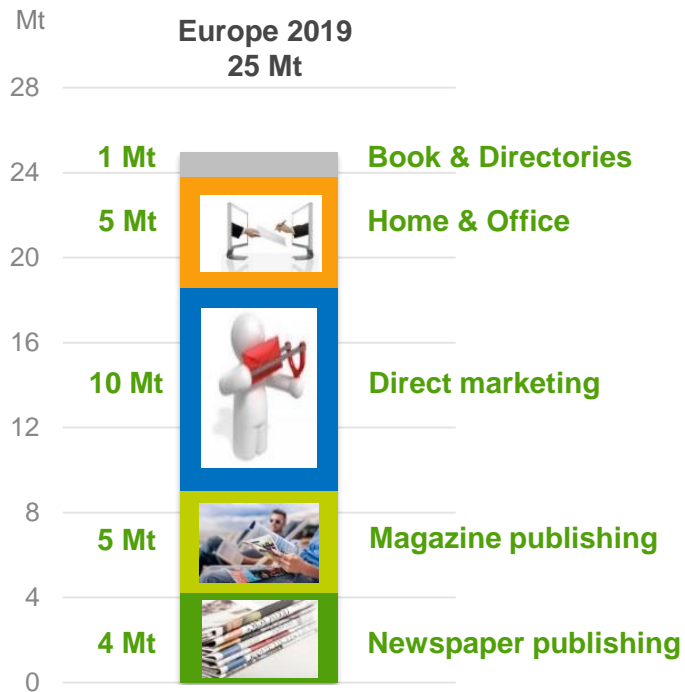
Paper demand impacted by the lockdowns, economic activity and structural changes^{*)}



Uncertainties for demand recovery and drivers in demand decline trend

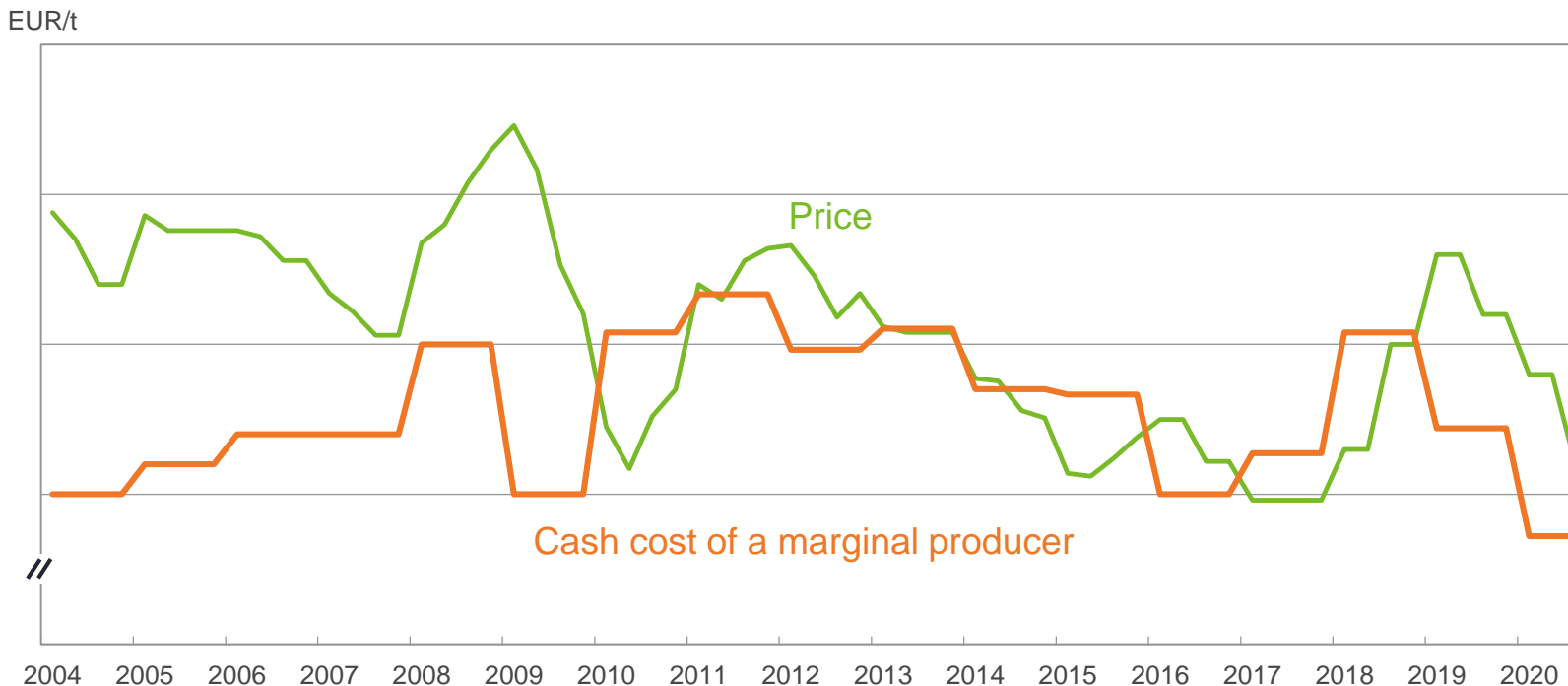
- Uncertain economic recovery
- Perpetuation of "new" consumption and digitalization trends
- Trend towards digital publishing and subscription models, cost of distribution
- Growth of e-commerce, digital customer engagement and promo in retail
- Adaption of digital records and work flows in administration, business and education
- Paper as 'chill media' for healthy offline time
- Trust in media, effectiveness of print promo

Paper demand by end use



Source: Euro-Graph, UPM

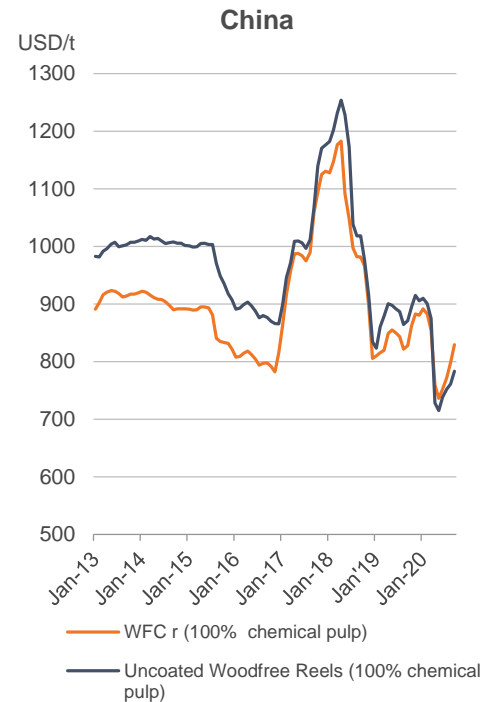
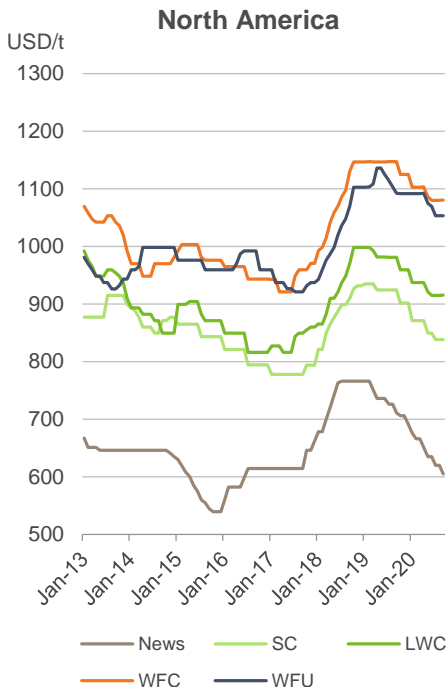
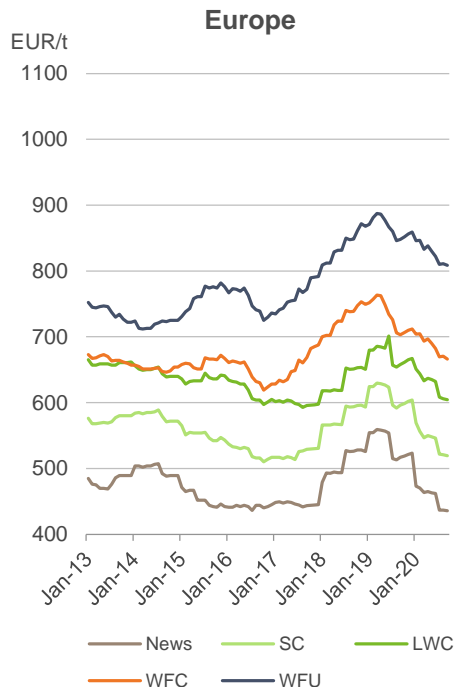
Paper price vs. cash cost of marginal cost producer



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

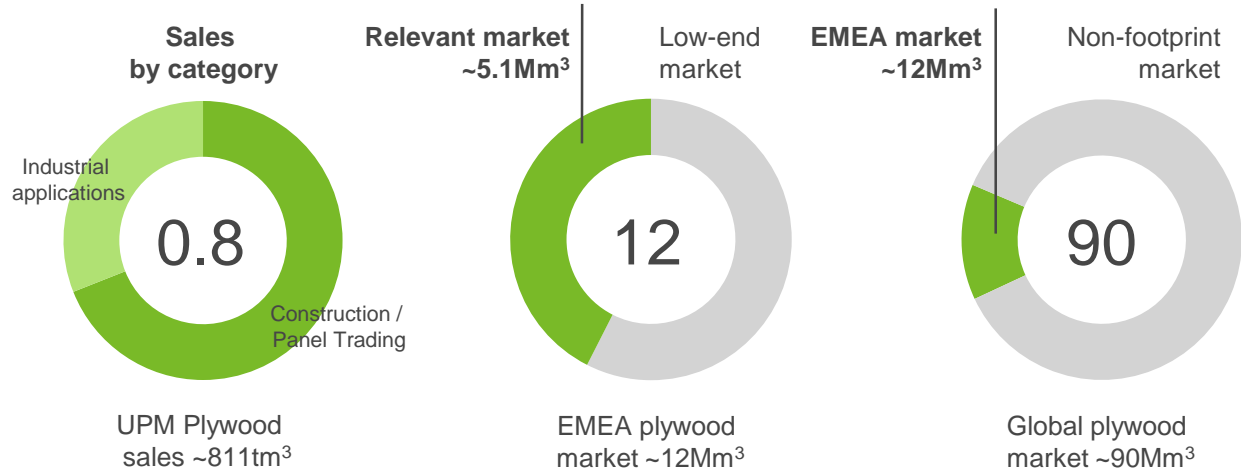
- Global leader in LNG plywood
- Competitive edge based on right quality and accurate on-time deliveries
- Long term commitment and benchmark service level
- Focus to secure leading position in LNG carriers and to extend offering into related applications using the same technologies (e.g. land storage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

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



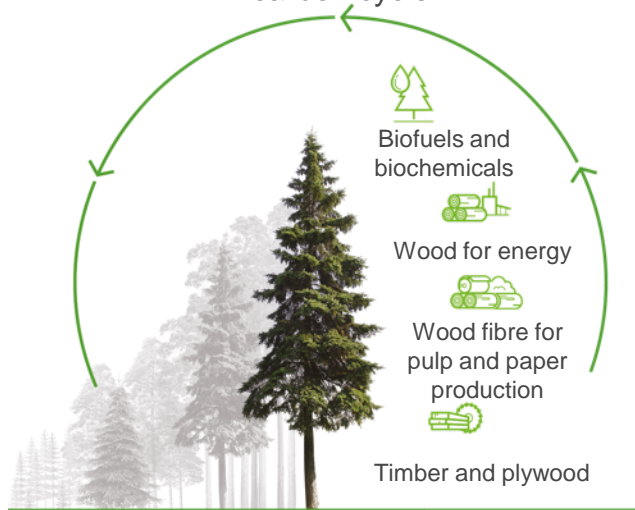
Strategic choices

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

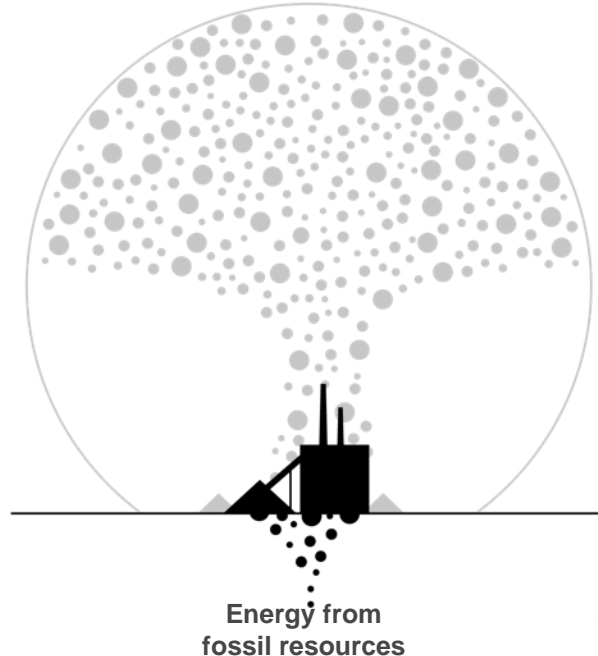


Bioeconomy offers a sustainable alternative to fossil-based economy

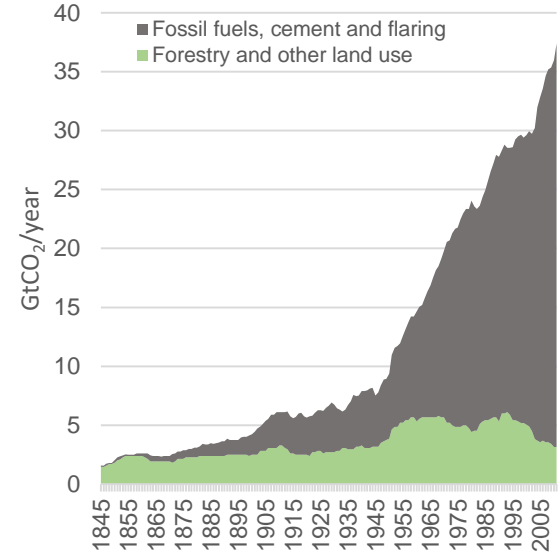
Sustainable biomass use ensures raw material availability and does not increase CO₂ in carbon cycle



Use of fossil resources faces resource scarcity and increases CO₂ in the cycle

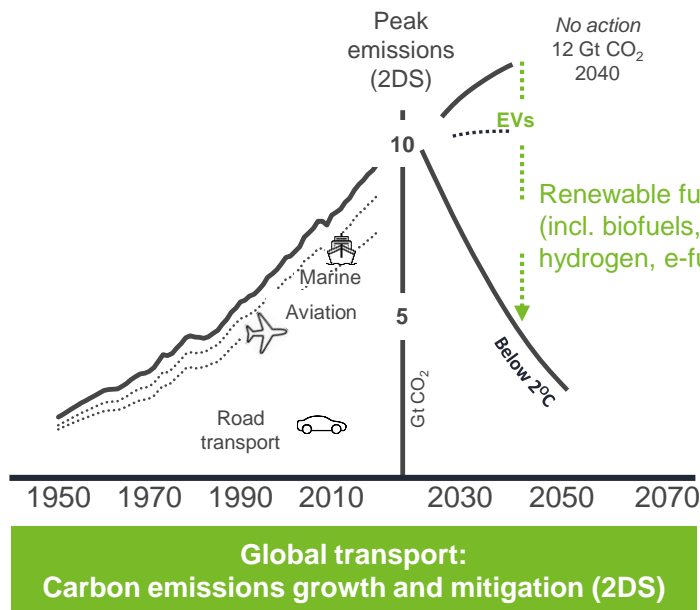


Use of fossil fuels has increased global CO₂-emissions, and needs to decreased

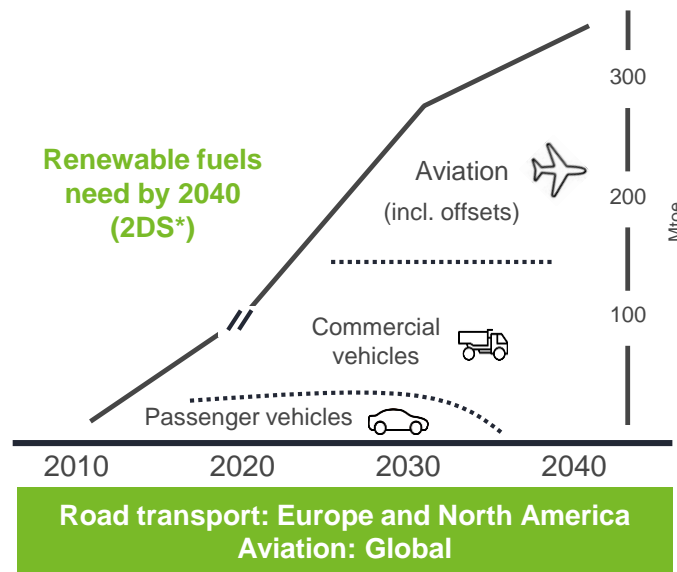


Source: IPCC AR5

Carbon mitigation in transport is dependent on renewable fuels despite recent decline in fuel consumption



Source: UPM based on IEA, EIA, Bloomberg



*The two degree scenario (2DS) is calculated vs. 2005 reference per sector (-30% 2030, -40% 2040, -50% 2050)

Source: UPM based on WoodMackenzie, Bloomberg, ICAO, EIA

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

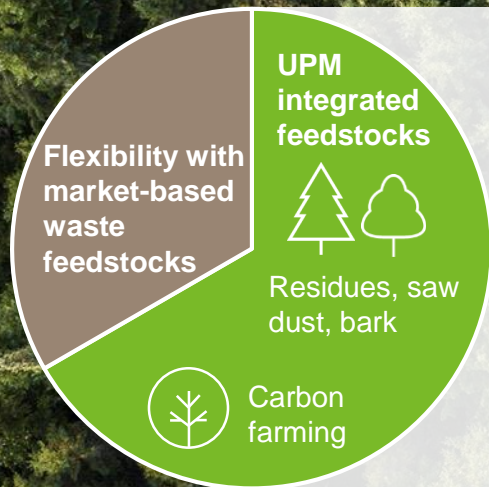
E-fuels future potential

DECARBONIZED TRANSPORT AND PETROCHEMICALS

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



UPM's sustainable biofuel feedstock concept founded on wood based and climate positive feeds



INTEGRATED WOOD BASED AND CLIMATE POSITIVE FEEDS

complemented with sustainable market based feedstocks



UPM Lappeenranta biorefinery
130,000t



Planned biorefinery
500,000t



VALUE FROM SEVERAL END-USES

Road transport, petrochemicals and aviation

UPM **BIOFORE**
BEYOND FOSSILS

