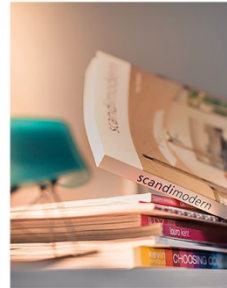


# UPM – THE BIOFORE COMPANY

# AIMING HIGHER WITH BIOFORE

Investor presentation  
July 2017

# UPM today



## UPM BIOREFINING

Pulp  
Biofuels  
Timber

## UPM ENERGY

Electricity  
generation and  
trading

## UPM RAFLATAC

Label  
materials for  
product and  
information  
labelling

## UPM SPECIALTY PAPERS

Label papers,  
release liners,  
office papers  
and flexible  
packaging

## UPM PAPER ENA

Magazine  
papers,  
newsprint and  
fine papers

## UPM PLYWOOD

Plywood and  
veneer  
products

## UPM BIOCOMPOSITES

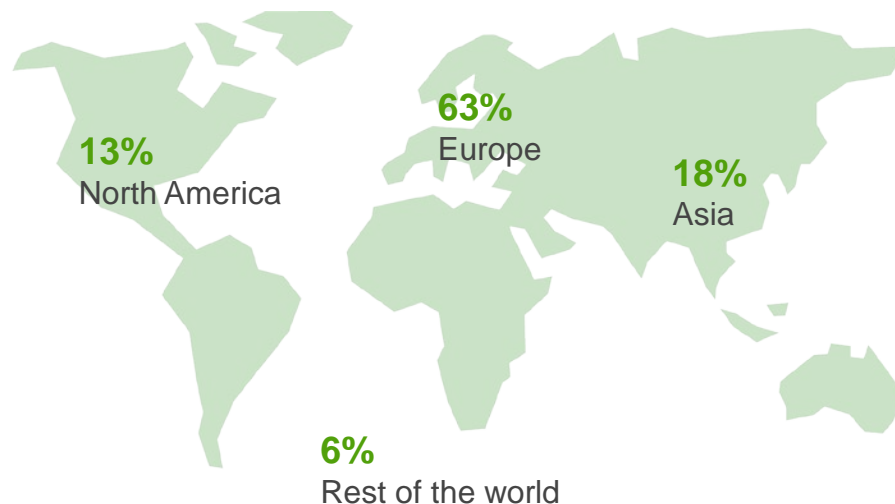
UPM  
BIOCHEMICALS

WOOD SOURCING  
AND FORESTRY

# Global businesses – local presence

UPM's sales by market 2016

**EUR 9,812 million**



**54**  
production plants  
in **12** countries



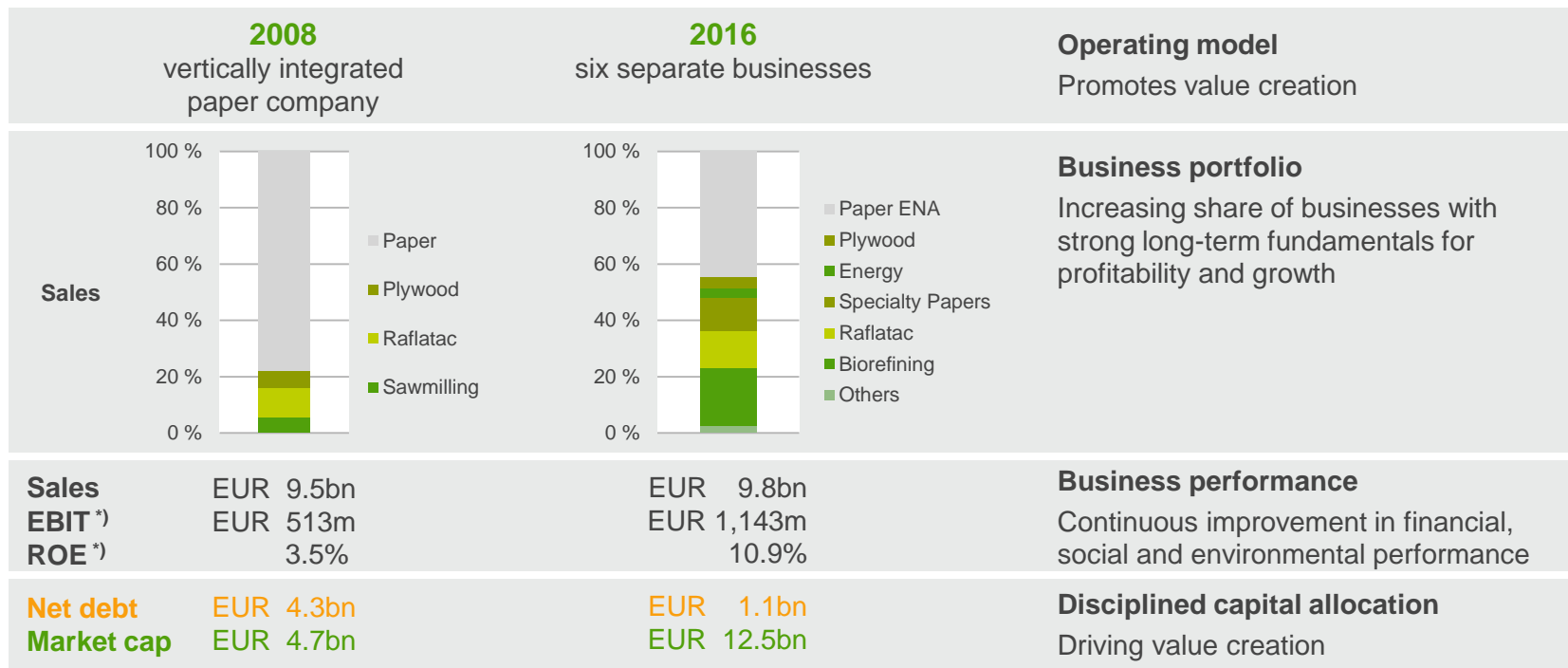
**19,300**  
employees  
in **45** countries

**12,000**  
customers  
in **120** countries

**85,000**  
shareholders  
in **40** countries

**55,000**  
suppliers  
in **70** countries

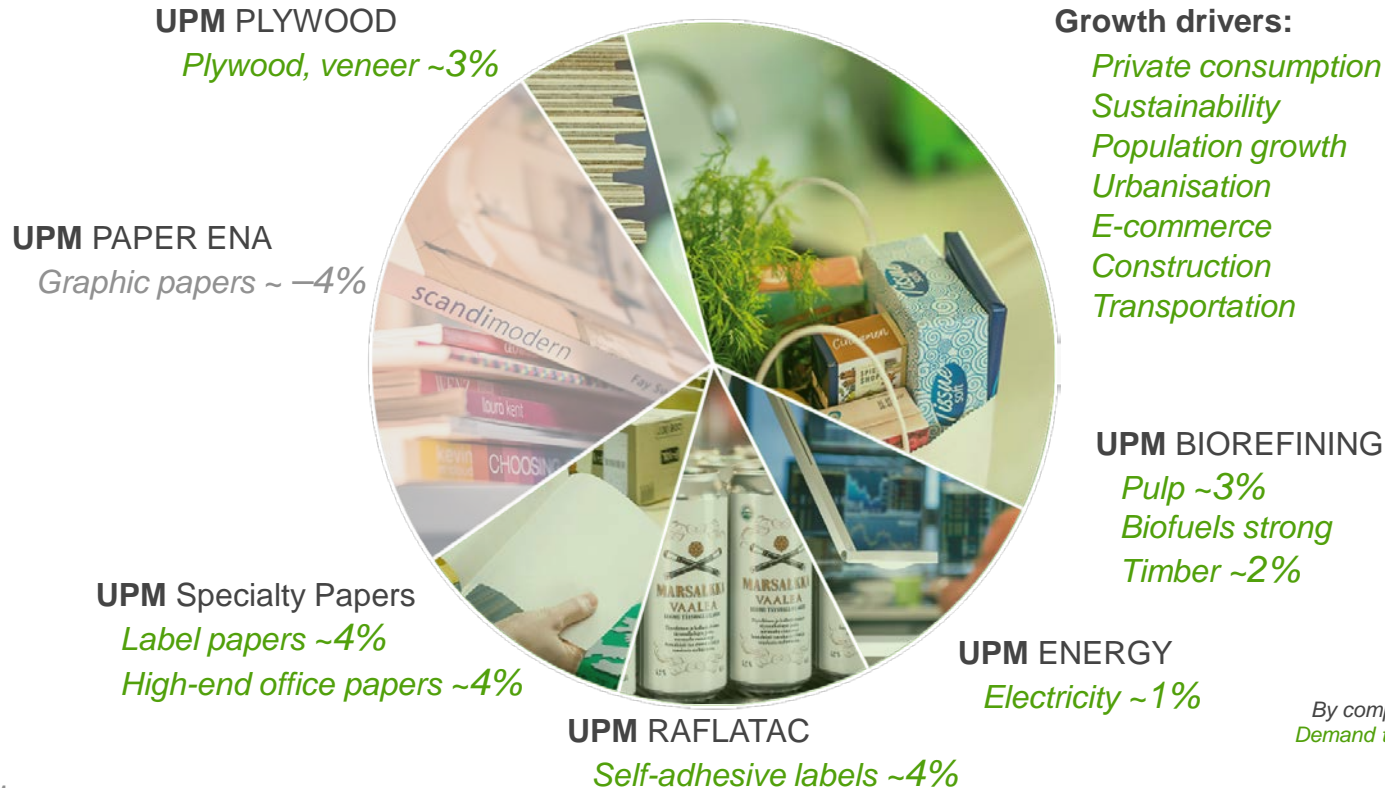
# UPM in transformation



\*) excluding special items for 2008, comparable figures for 2016

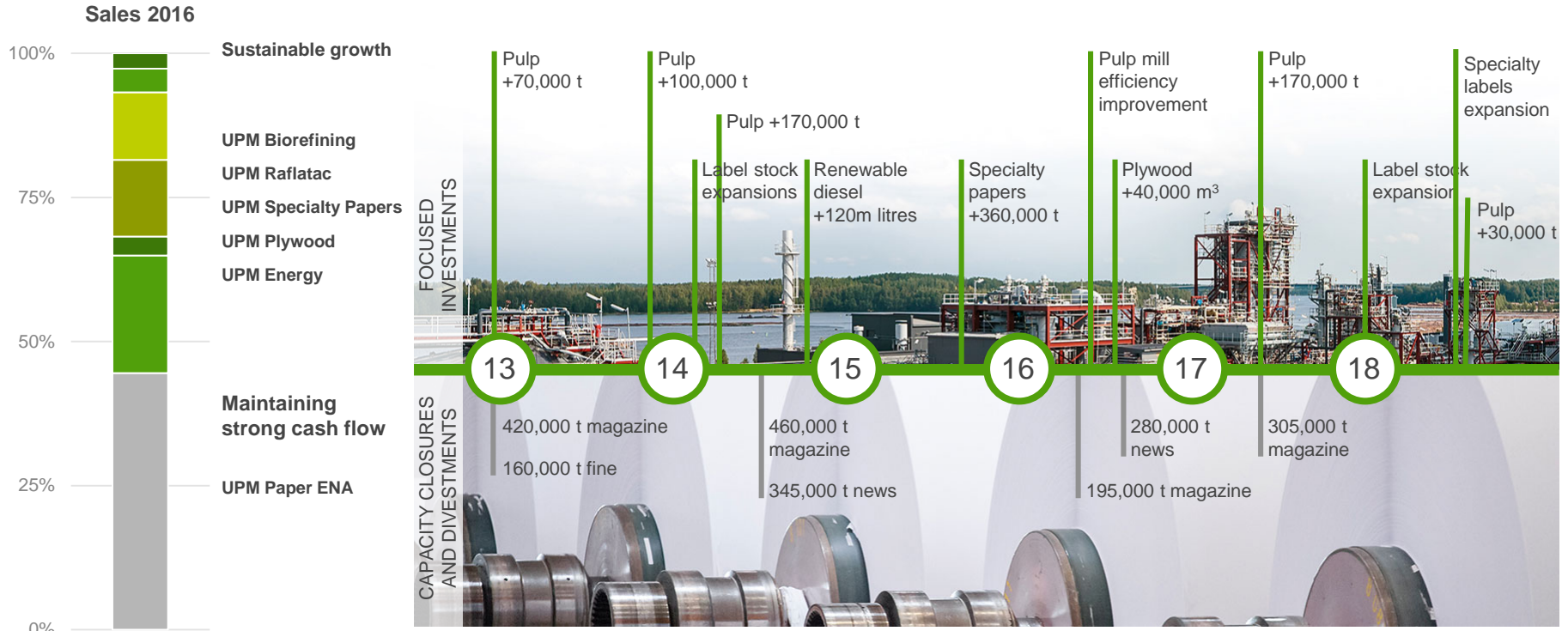
# Competitive businesses with strong market positions

## Operating on healthily growing markets

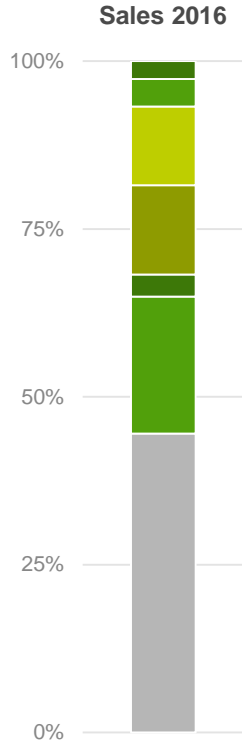


By comparable EBIT 2016  
Demand trend growth, % pa

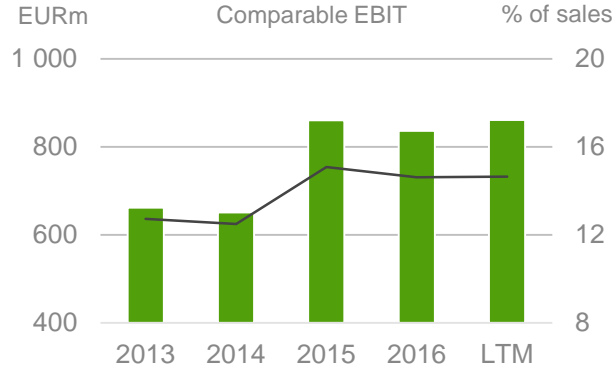
# Increasing share of businesses with strong long-term fundamentals for profitability and growth



# Value creation through sustainable growth and cash generation



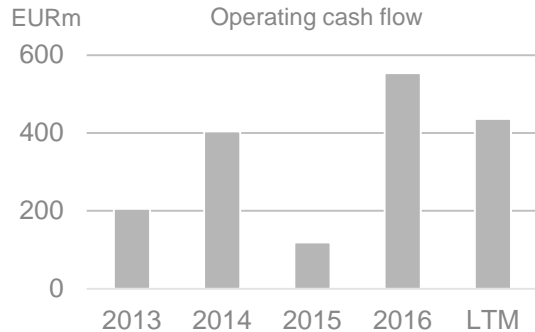
UPM Biorefining  
UPM Raflatac  
UPM Specialty Papers  
UPM Plywood  
UPM Energy



## Sustainable growth

- Commercial success
- Cost efficiency
- Focused growth investments
- Product mix development

UPM Paper ENA



## Maintain strong cash flow

- Commercial success
- Cost efficiency
- Efficient use of assets, including restructuring

# Serving the increasing customer demand with the focused growth projects



## Fully contributing

- Pietarsaari pulp mill expansion
- Fray Bentos pulp mill expansion
- Kymi pulp mill expansion
- Raflatac expansion in APAC, Poland
- Kaukas pulp mill efficiency



## Contributing well in H1 2017

- Lappeenranta biorefinery
- Changshu speciality paper machine
- Otepää plywood mill expansion



## Under construction

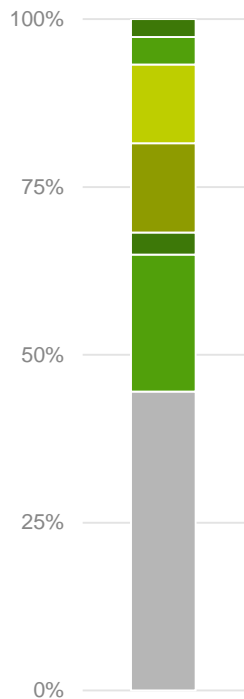
- Kymi pulp mill expansion 2
- Raflatac expansions in Poland and Finland
- Kaukas pulp mill expansion 2





# Focused investments are delivering growth

Sales 2016

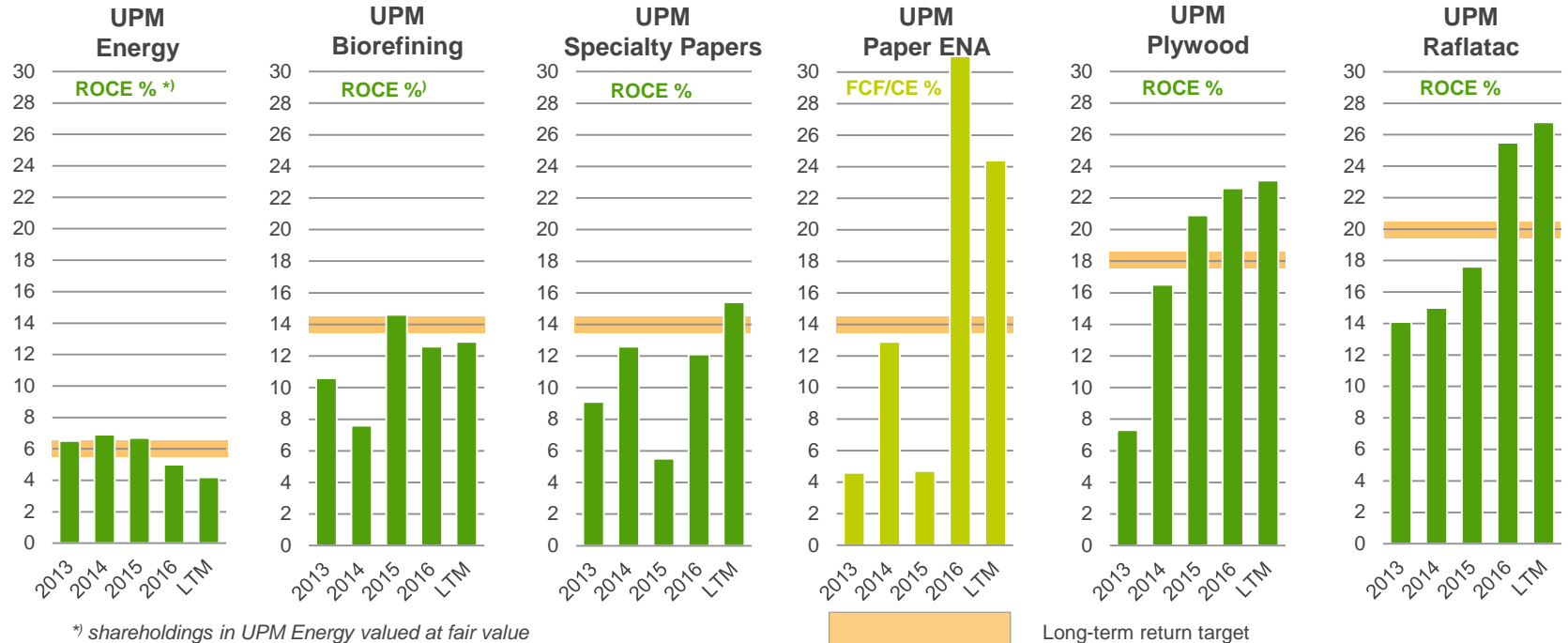


Average delivery growth 2011 –2016

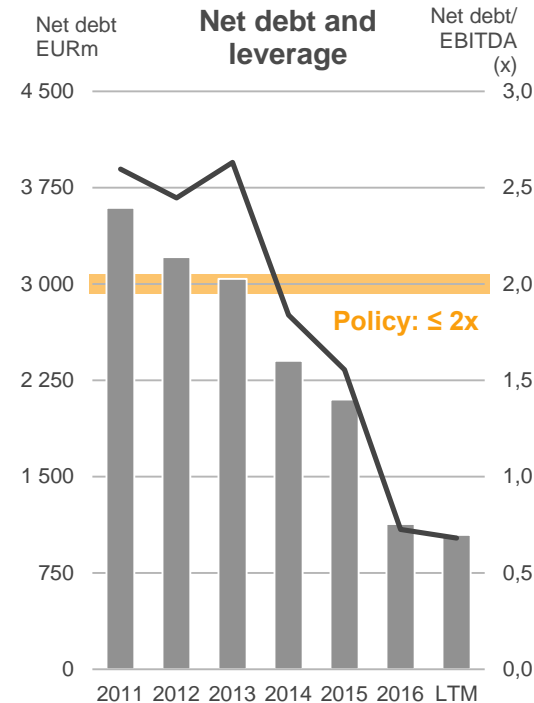
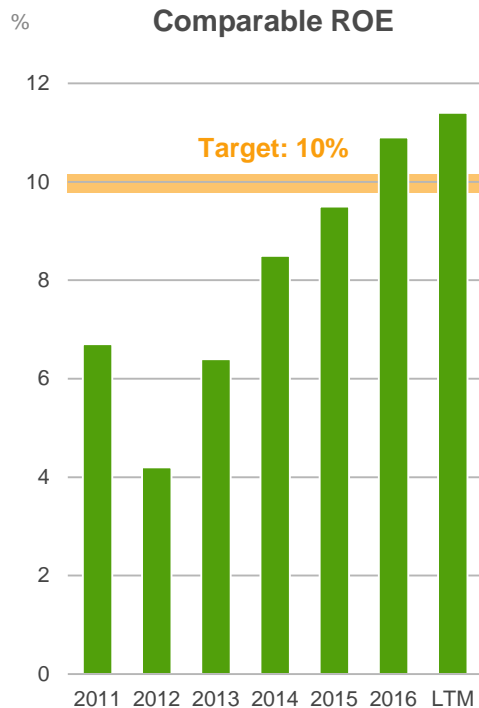
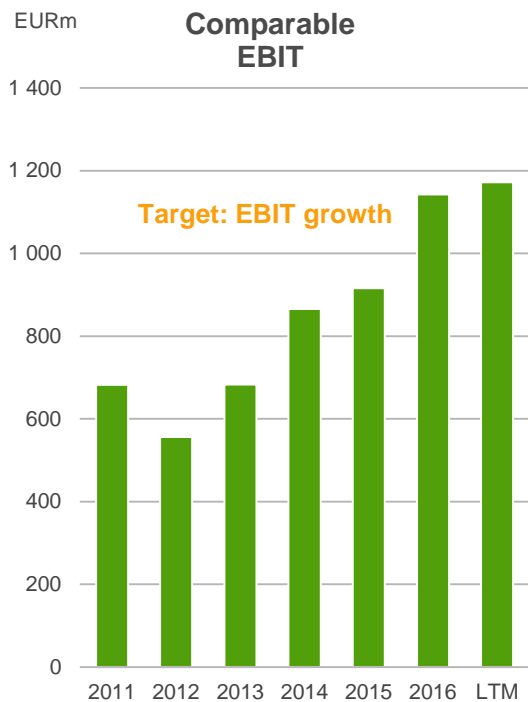
<b>UPM Biorefining</b>	Pulp Biofuels	CAGR <b>+3%</b> <b>New business</b>
<b>UPM Raflatac</b>	Standard products Films and specials	CAGR <b>+4%</b> CAGR <b>+8%</b>
<b>UPM Specialty Papers</b>	Label materials Cut-size	CAGR <b>+4%</b> CAGR <b>+6%</b>
<b>UPM Plywood</b>	Plywood	CAGR <b>+3%</b>



# Business area long-term targets compared with realised returns



# Group financial performance



Comparable figures for 2014 – 2017, excluding special items for earlier years

# AIMING HIGHER

WITH BIOFORE

## Direction: grow businesses with strong long-term fundamentals and sustainable competitive advantage

### Operating model

→ *Better than sum of parts*

- Separate businesses
- Top performance
- Corporate benefits

### Performance

→ *Continuous improvement*

- Profit focus
- High performing people
- Value-based leadership and responsibility
- Innovation

### Capability

→ *Foundation for opportunities*

- Strong cash flow
- Strong balance sheet
- Corporate structure

### Capital allocation

→ *Attractive returns*

- Attractive dividend
- Focused growth investments
- Selected larger investments
- Synergistic M&A

### Growth

→ *Earnings growth and valuation*

- Current growing businesses
- New bio-based businesses

# Financial performance in 2016 – disciplined capital allocation in action

## Top performance

Comparable EBIT

**EUR 1,143m**

+25%

Comparable ROE

**10,9%**

+1,4%pp

## Strong cash flow

Operating cash flow

**EUR 1,686m**

+42%

## Attractive dividend

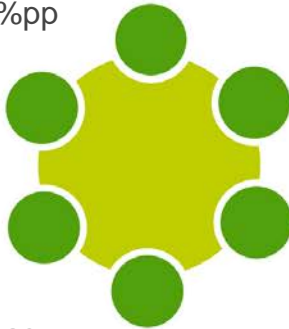
Dividend

**EUR 507m**

+27%

**5/6**

business areas  
achieved their  
financial targets



## Net debt reduction

EUR 969m, -46%

## Industry-leading balance sheet

**Net debt/  
EBITDA  
0,73x**

## Focused investments

Capital expenditure

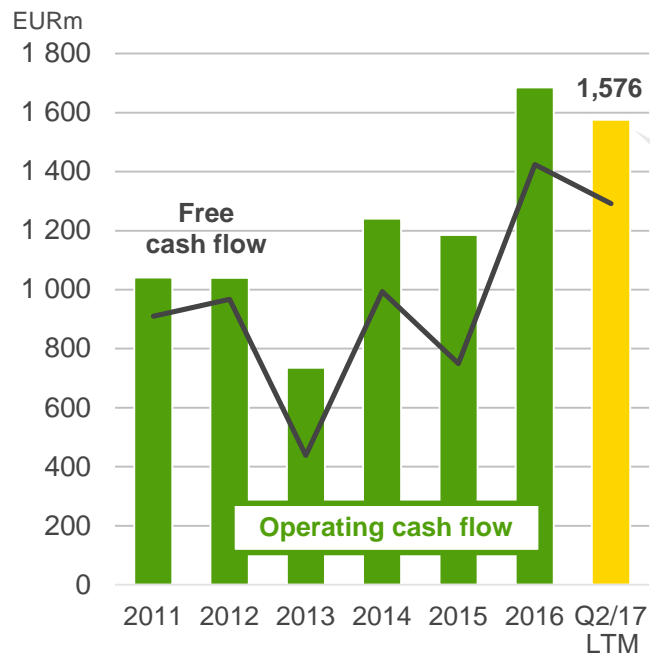
EUR 325m

**Attractive returns**

reached 80% of the EUR 200m  
EBITDA target set for the first  
wave of growth projects

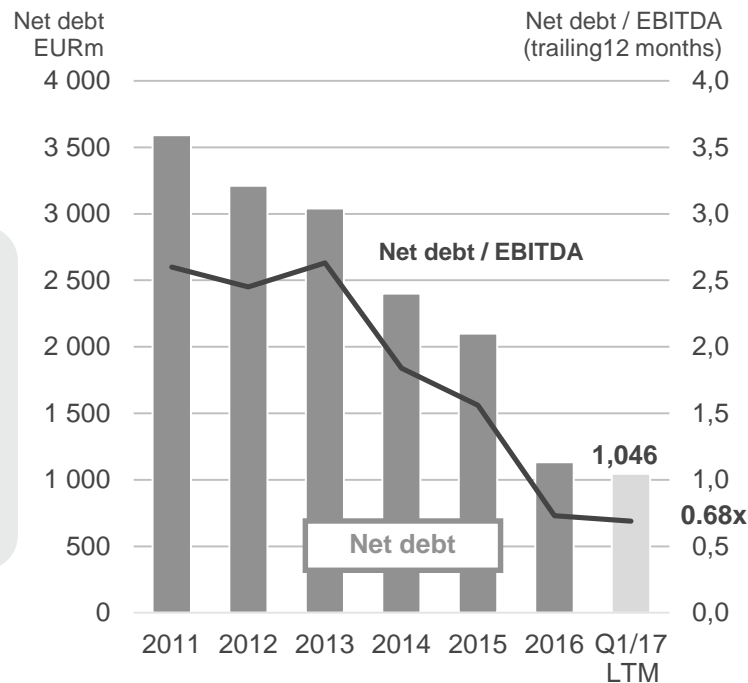
# Strong cash flow and balance sheet

## Operating cash flow

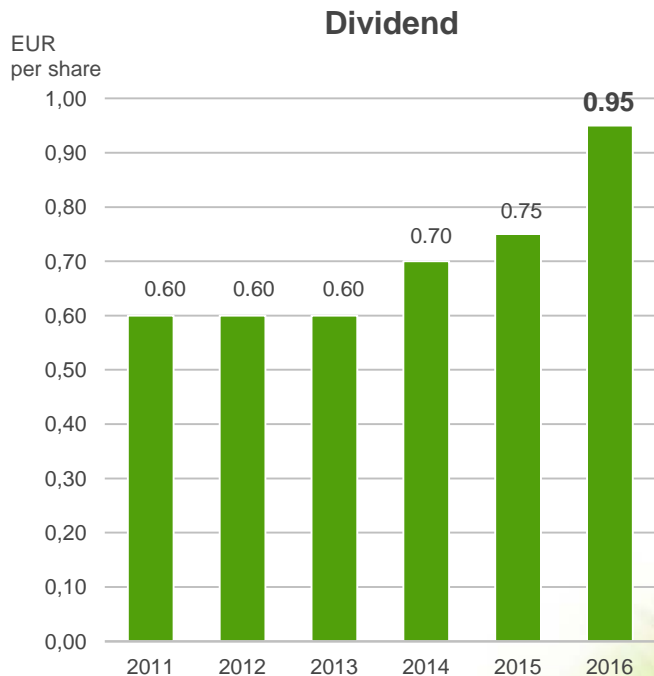


Q2/17 operating cash flow EUR 269m  
Working capital increased by EUR 59m

## Net debt



# Dividend



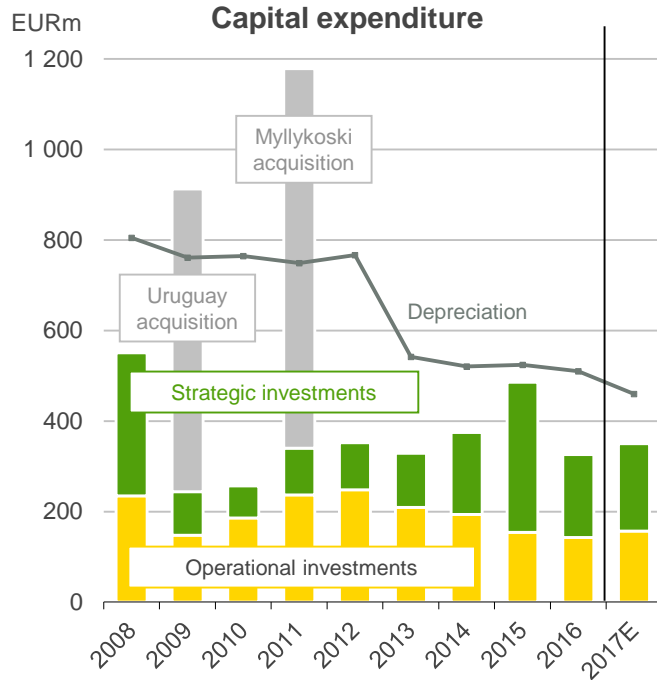
## Dividend policy

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

## Dividend for 2016

- EUR 0.95 (0.75) per share, totalling EUR 507m
- 30% of 2016 operating cash flow of EUR 1,686m

# Low investment needs in existing assets allow growth projects with modest total capex



## Focused growth investments

- ✓ Good returns and fast payback
- ✓ Low implementation risk
- ✓ Financed from operating cash flow

## Low replacement investments

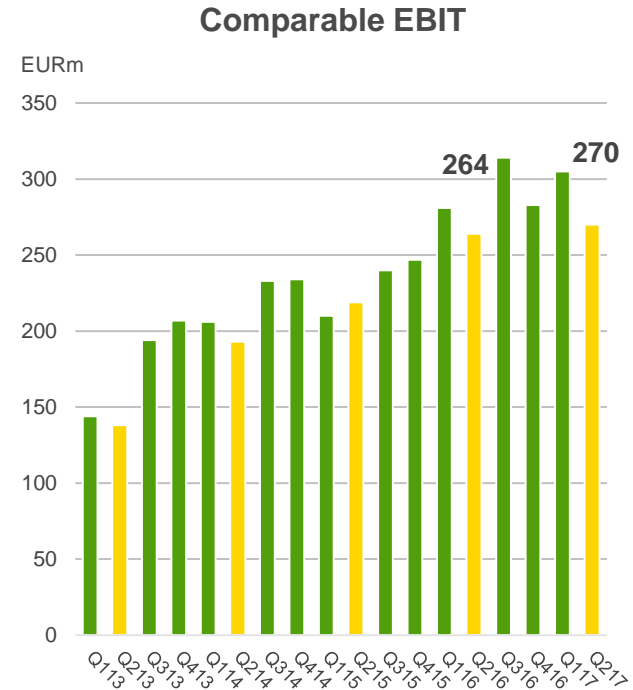
- ✓ Asset quality in all businesses, e.g. large competitive pulp mills
- ✓ UPM Paper ENA

► **Modest total capex and attractive returns**



# Q2 2017 – Good performance and favourable market demand continued

- Comparable EBIT increased by 2% to EUR 270m (264m)
- Temporarily higher fixed costs and lower operational efficiency due to high maintenance activity:
  - EUR -20m compared with Q2 2016
  - EUR -45m compared with Q1 2017
- Q2 2017 operating cash flow was EUR 269m (434m)
- Net debt decreased to EUR 1,046m (1,876m), net debt/EBITDA to 0.68x (1.25x)



# Q2 2017 – Good market demand, high maintenance activity

## UPM BIOREFINING

- Good demand, pulp deliveries +2%, strong growth in biofuels
- Pulp prices higher
- Pietarsaari pulp mill maintenance
- Kaukas investment decision

## UPM PAPER ENA

- Graphic paper deliveries –2%
- Seasonally high fixed costs, including maintenance
- Fibre costs higher

## UPM ENERGY

- Electricity deliveries –17%
- Hydropower generation below average and prolonged maintenance at Olkiluoto nuclear power plant

## UPM SPECIALTY PAPERS

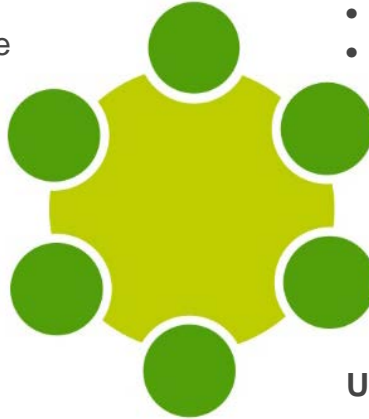
- Significant progress in product mix, higher release liner deliveries
- Good demand
- Pulp costs higher, sales prices higher

## UPM RAFLATAC

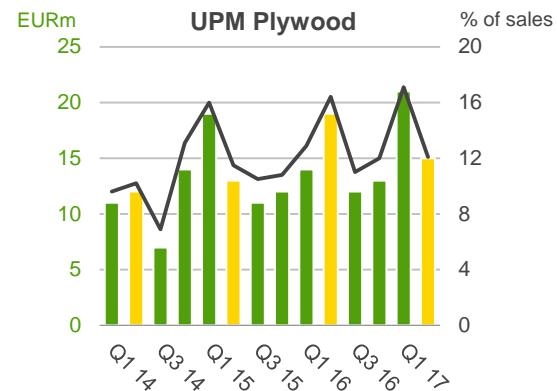
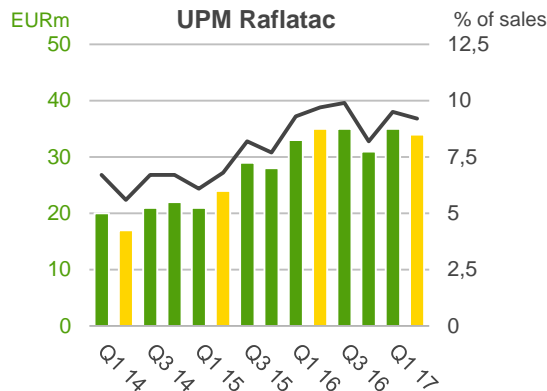
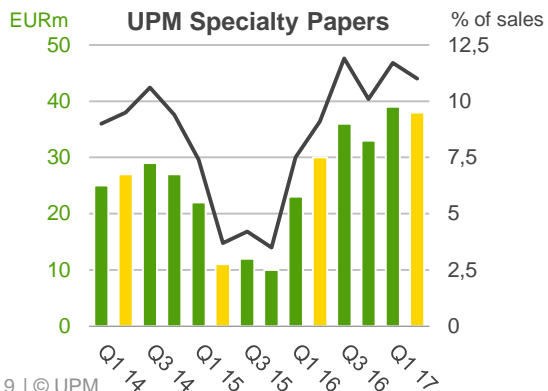
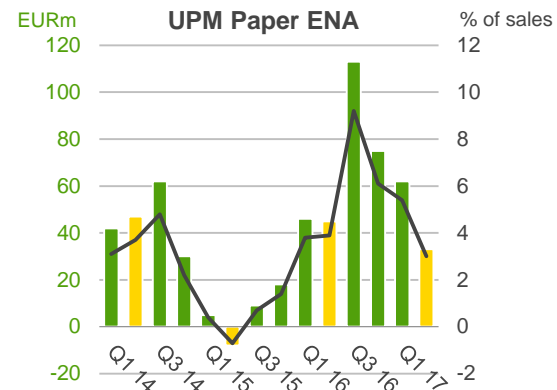
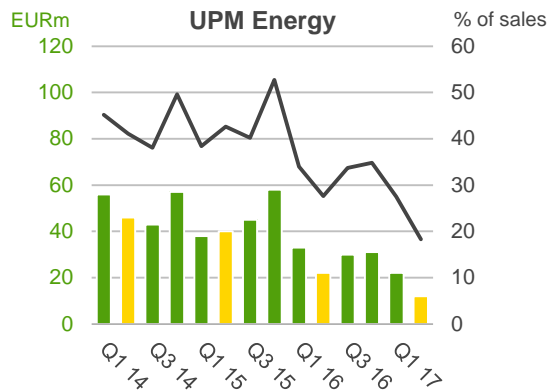
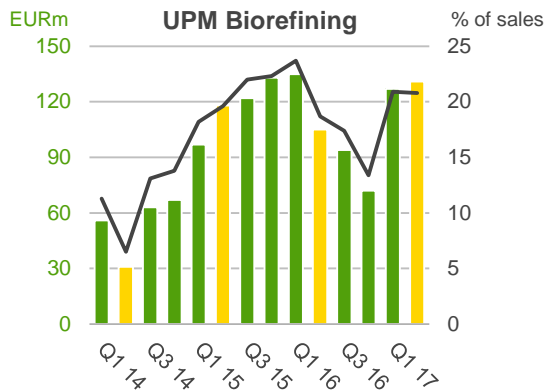
- Good demand, deliveries +6%
- Variable costs higher
- Specialty label investment decision, Tampere

## UPM PLYWOOD

- Good demand, deliveries +4%
- Variable costs higher, sales prices higher



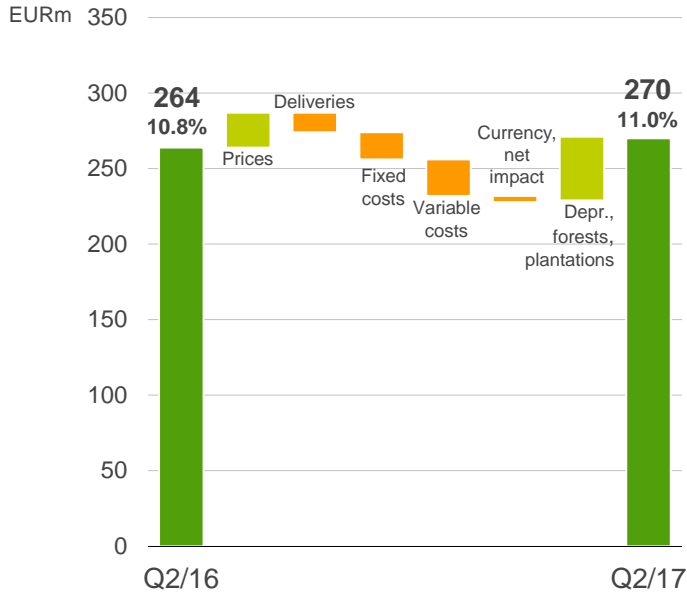
# Comparable EBIT by business area



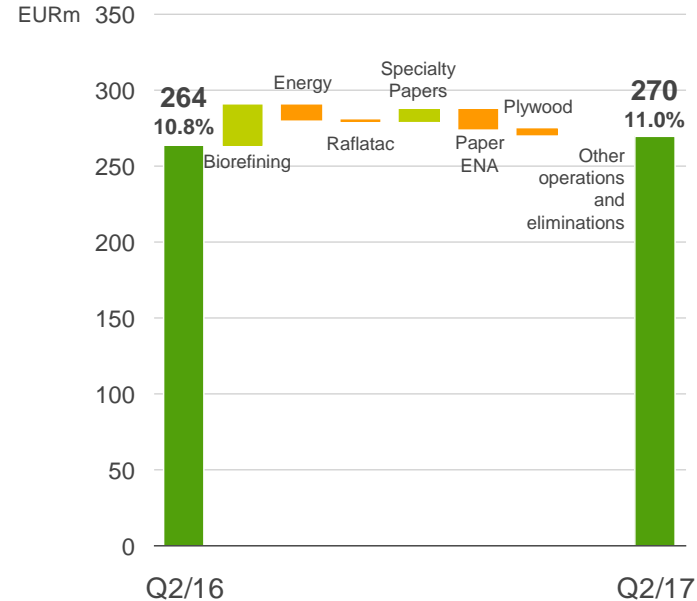


# Comparable EBIT in Q2 2017 vs. Q2 2016

High maintenance activity in Q2/17 resulted in temporarily higher fixed costs and lower operational efficiency. Prices increased.



Higher maintenance activity in Biorefining and Energy. Pulp prices increased. Mix improvement in Specialty Papers.



# Outlook for 2017

- UPM's profitability improved significantly in 2016 and is expected to continue on a good level in 2017.
- Demand growth is expected to continue for most of UPM's businesses, while demand decline is expected to continue for UPM Paper ENA. The focused growth projects continue to contribute gradually to UPM's performance.
- Following a deflationary environment in recent years, 2017 is expected to show modest input cost inflation. UPM will continue measures to reduce fixed and variable costs to mitigate this.
- Q3 2017 is expected to include significantly less maintenance activity than Q2 2017 in UPM Biorefining, UPM Paper ENA and UPM Energy.

# Responsibility is good business

## MORE WITH BIOFORE



Creating value through products and innovation



Creating competitive advantage and long-term value by efficiency

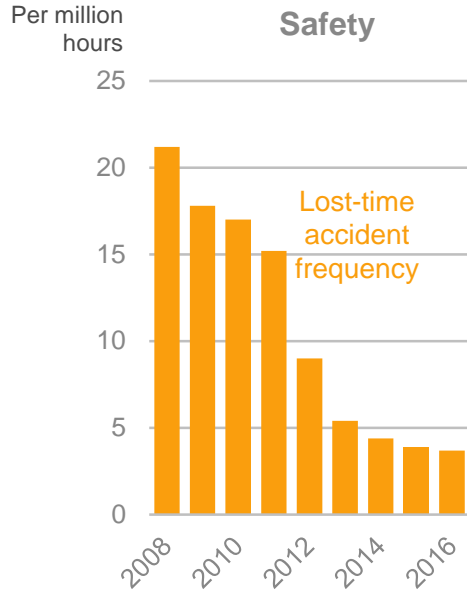


Risk mitigation by responsible value chain and production

**"We believe that customers, investors and other stakeholders value responsible operations that keep risks under control and add to our business opportunities, thereby increasing the company value."**

UPM Annual Report 2015

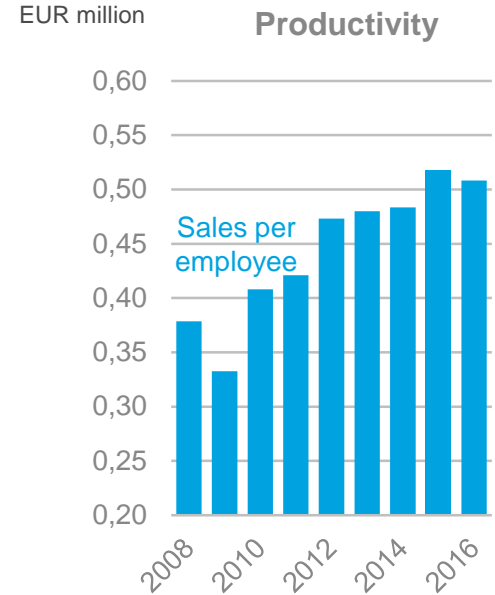
# Creating competitive advantage and long-term value by engagement



5-year change:  
**-76%**



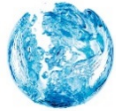
5-year change:  
**+9**



5-year CAGR:  
**+4% pa**

# Creating competitive advantage and long-term value by efficiency

Case: UPM Changshu mill in China



Water

**-60%**

Per tonne of paper



Energy

**-30%**

Per tonne of paper



Waste to landfill

**-60%**

Per tonne of paper



Certified fibre

**85%**

In 2015

2015 compared to 2005



COD in effluent

**-75%**

Per tonne of paper



SO<sub>2</sub> emission

**-90%**

Per tonne of paper

water intake



water discharge



Source: UPM



# Consistent long-term work receives external recognition



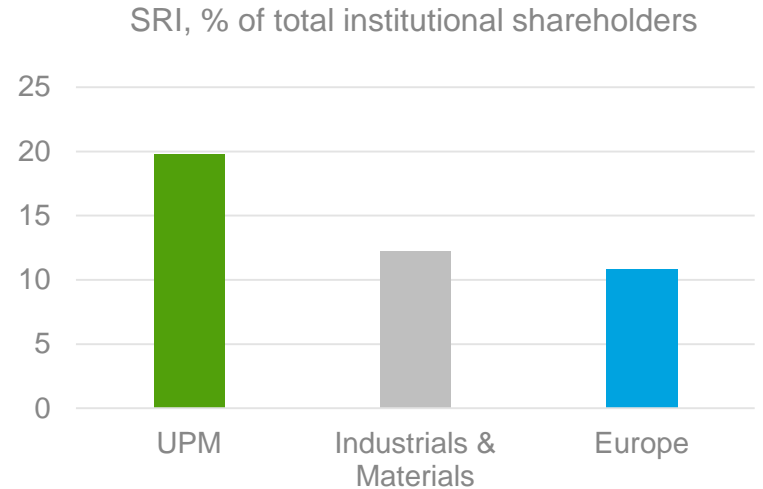
## UPM in sustainability indices



MEMBER OF  
**Dow Jones Sustainability Indices**  
In Collaboration with RobecoSAM



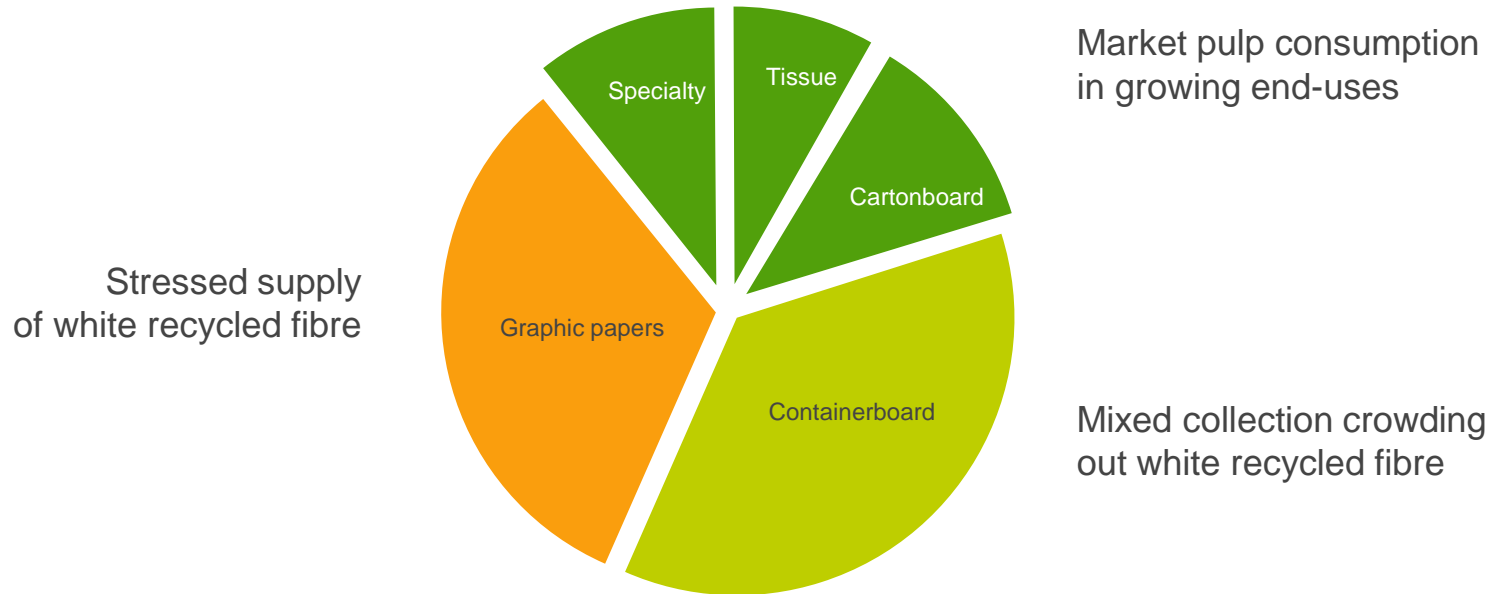
Sustainable and Responsible (SRI) investors form a significant part of UPM's shareholders



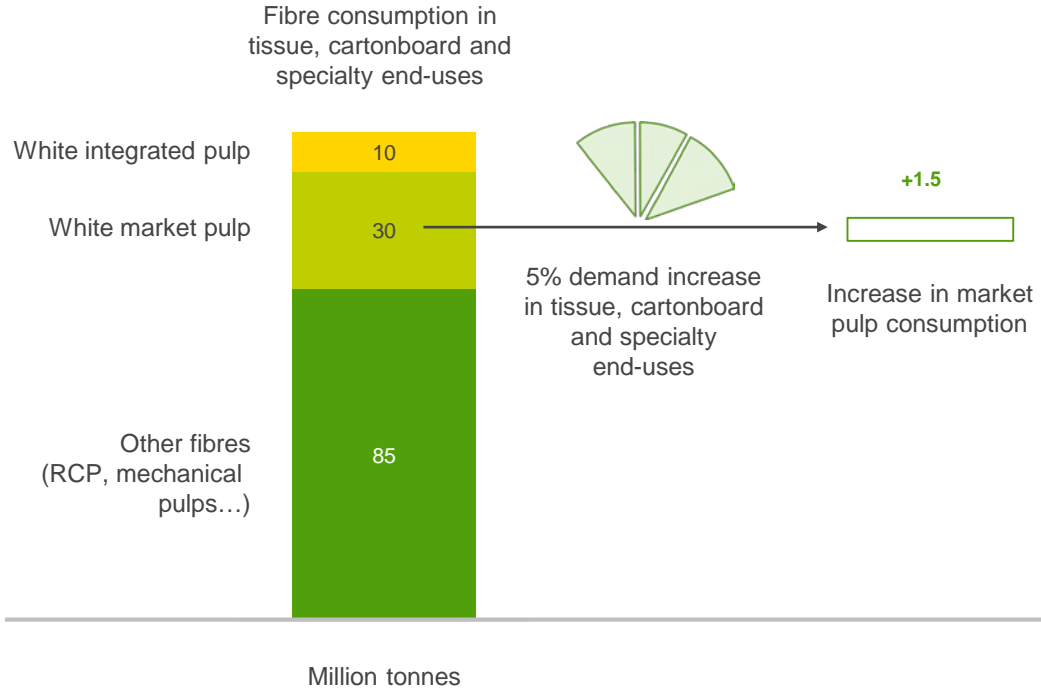
Source: Nasdaq, September 2016

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

## Global paper and board production

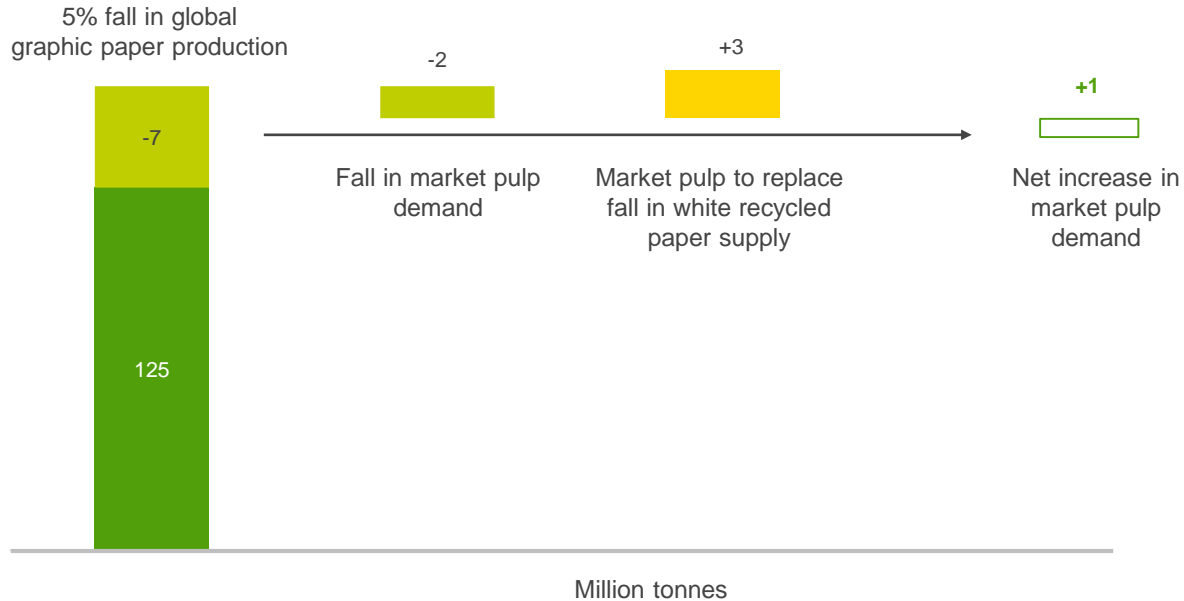


# Case: Market pulp consumption in growing end-uses

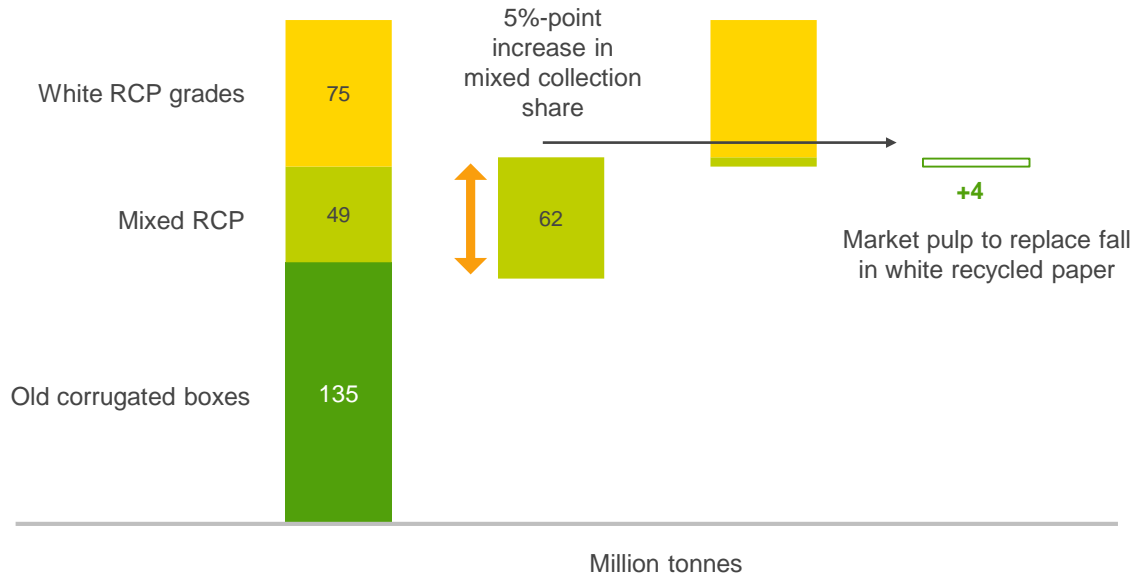


Source: Pöyry, Hawkins Wright, UPM

# Case: Stressed supply of white recycled paper

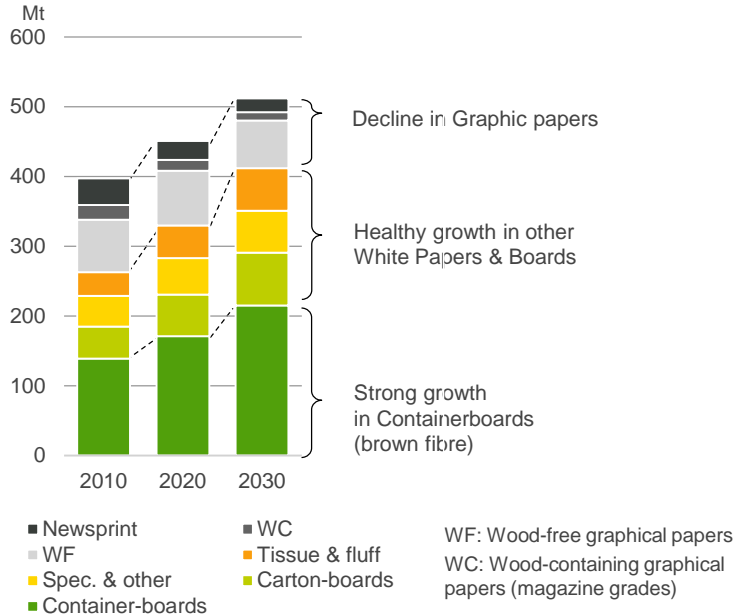


# Case: Mixed collection crowding out white recycled fibre

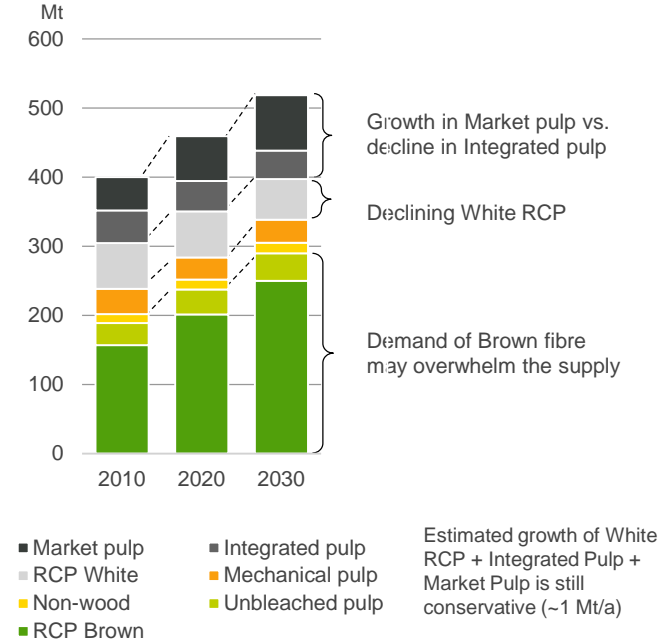


# Summary of pulp demand outlook

## Increase in end use ...

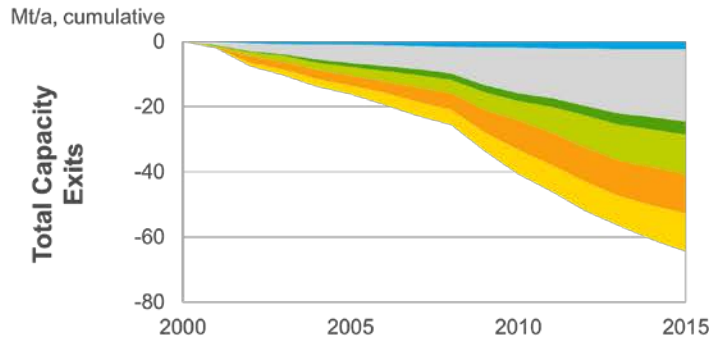
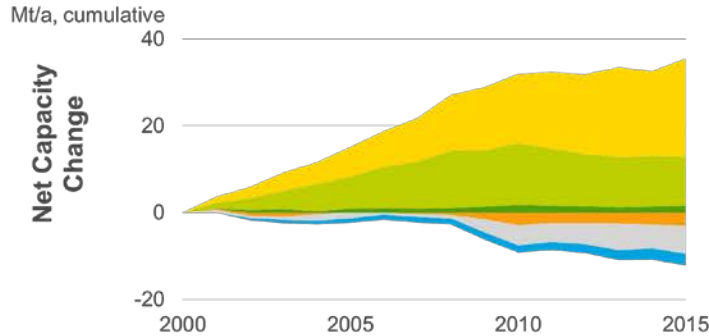


## ... will drive fibre demand in coming decades



Source: UPM, Pöyry, RISI

# White fibres in different stages of life-cycle; 64 Mt capacity closed within 2000–2015

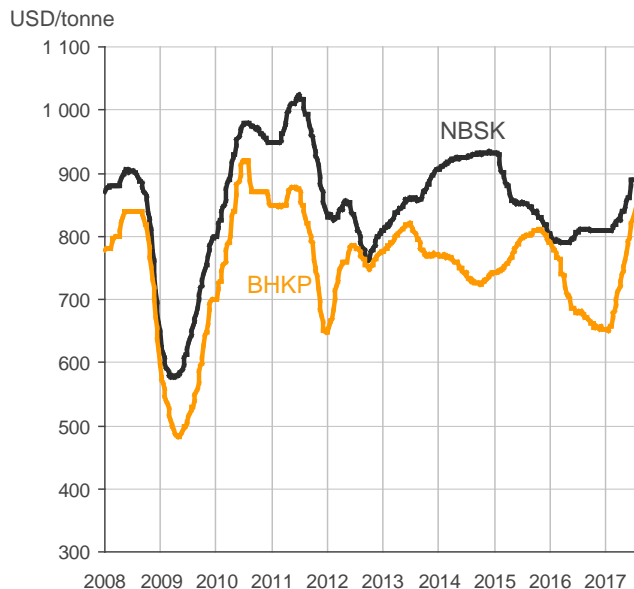


Note: Including both market and integrated pulp

- **Hardwood pulp** capacity has experienced strong net growth after 2000 and is expected to continue growing.
- **Softwood** has faced closures as much as hardwood. New demand in China is turning decline into a slow growth.
- **White RCP** was the fastest-growing fibre in Europe and NA in early 1990's. After recession capacity has been in decline due to very high collection rates and diminishing supply of graphic paper.
- **Mechanical pulp** continues to decline along with graphic papers.
- **Non-wood pulps** consumed mostly in China are under pressure due to environmental reasons.
- **Sulphite** has been in decline for decades.

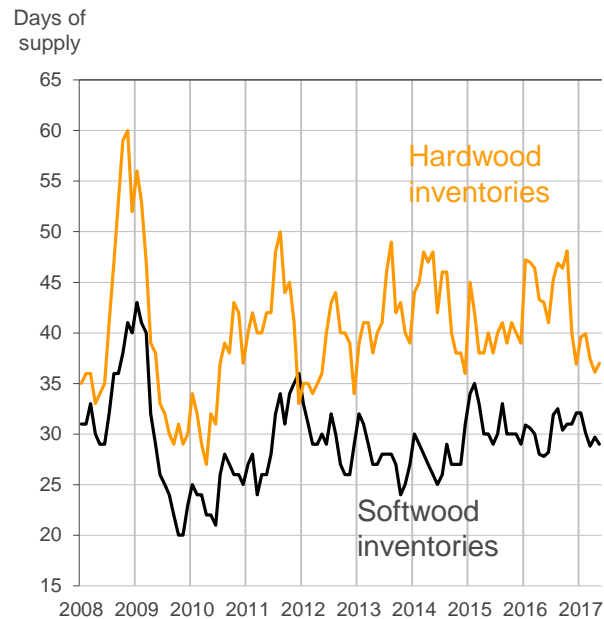
# Chemical pulp market

Q2 NBSK pulp price increased by 5% from Q1  
Q2 BHKP pulp price increased by 15% from Q1



Source: FOEX Indexes Ltd.

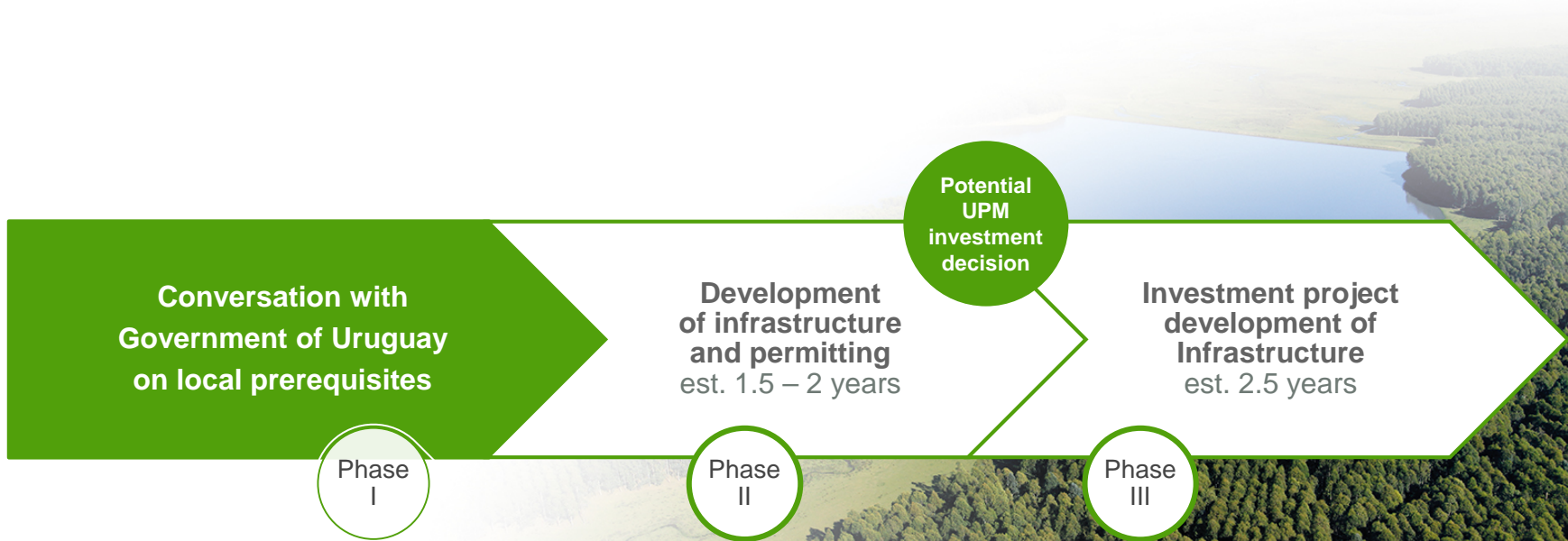
## Pulp inventories



Source: PPPC World-20 statistics



# Potential pulp mill in Uruguay could be a competitive alternative – time schedule is several years



# UPM Biofuels in existing and future end-use



Fuel retail



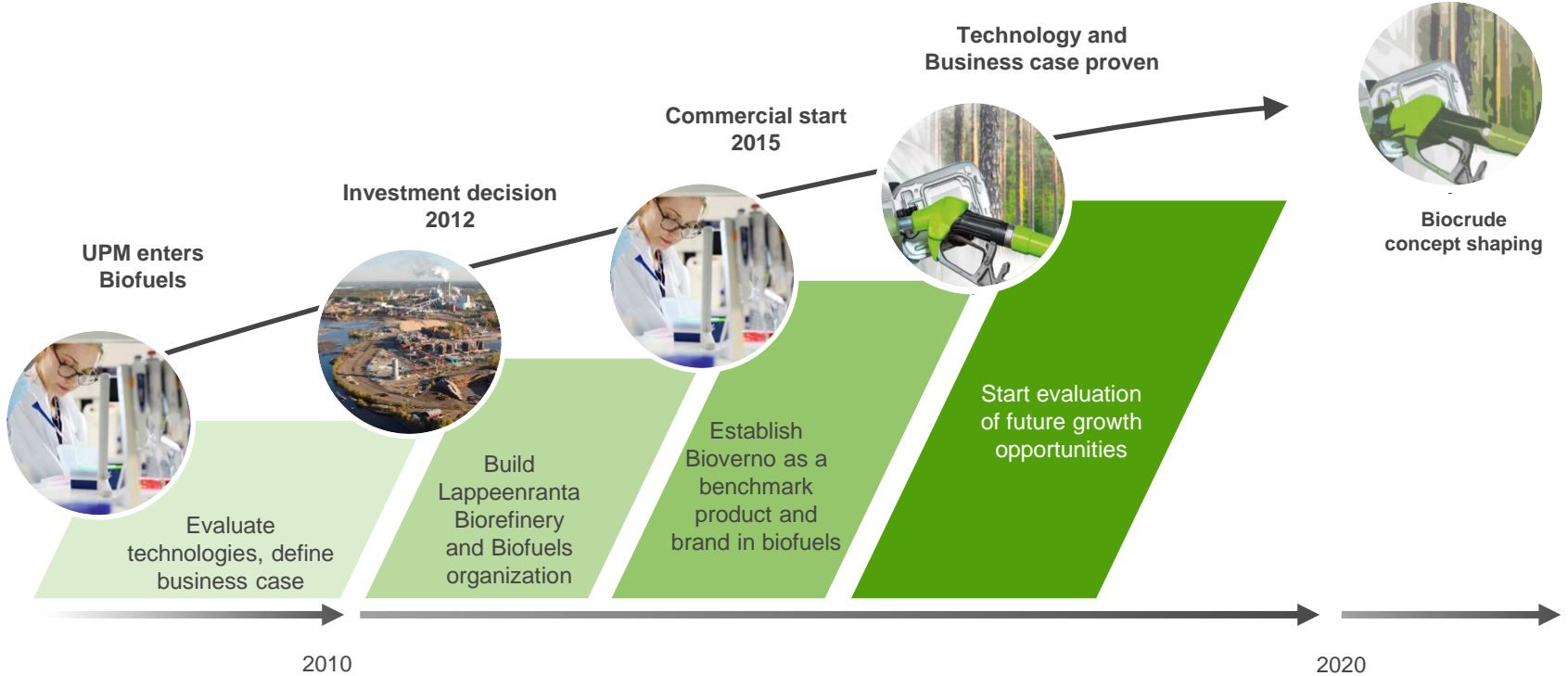
Dedicated green fleets



Marine/Aviation

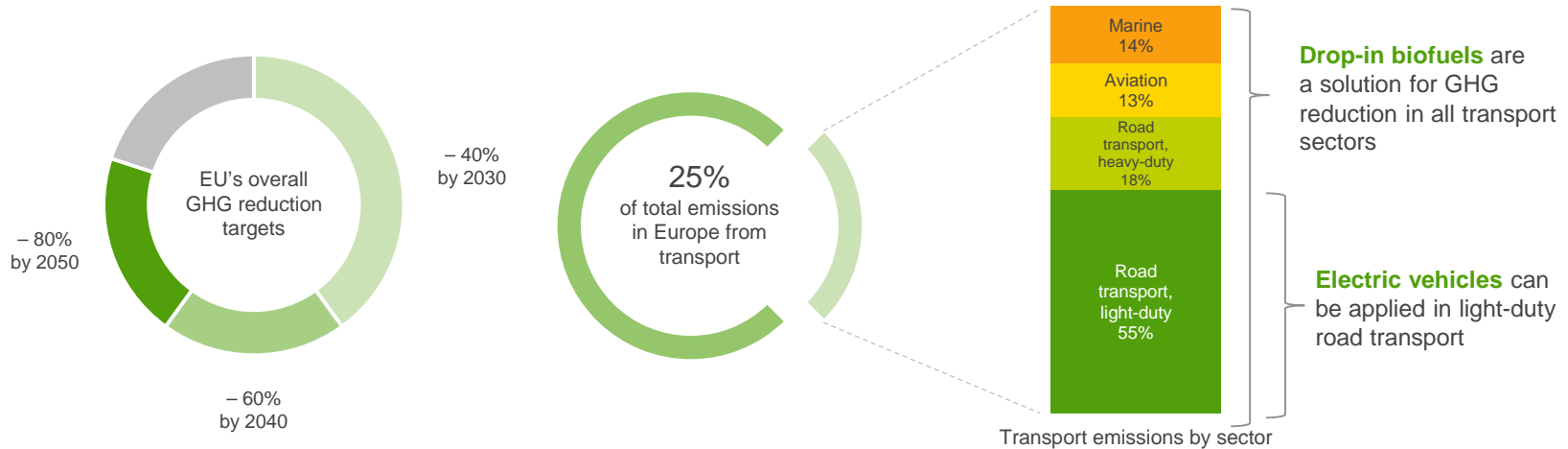


# UPM Biofuels business evolving



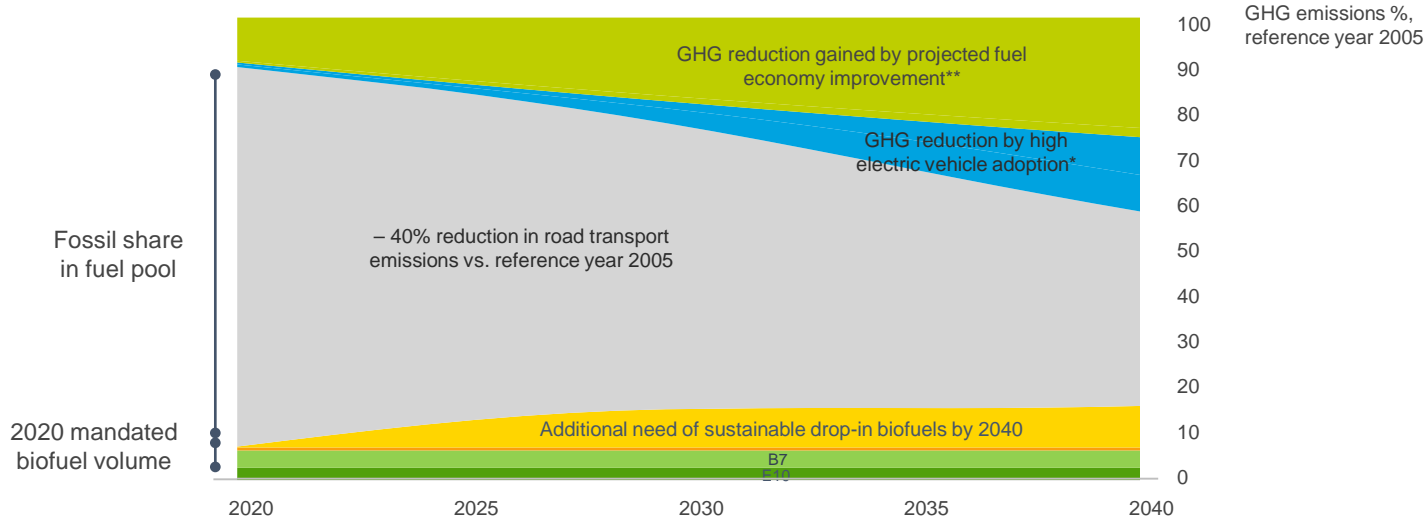
# Significant emission cuts needed in transportation sector

EU's greenhouse gas reduction targets cannot be met without significant emission cuts in transport – actions needed in all sectors



# All energy and technology options needed

Decarbonizing European transport requires effective use of all energy and technology options – renewable drop-in fuels a fast-lane solution



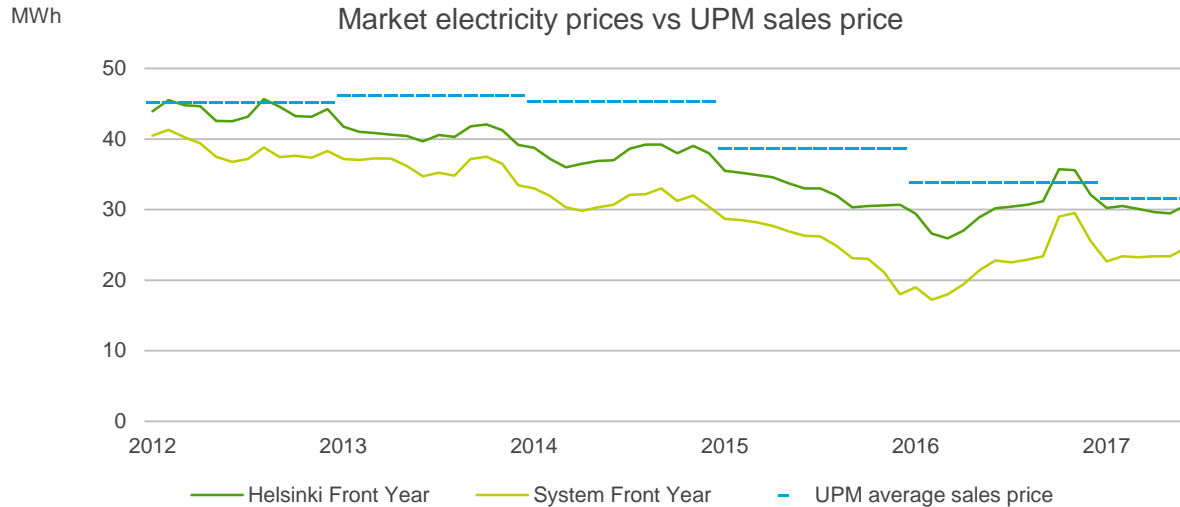
\* Calculated based on "Global EV sales outlook to 2040" by Bloomberg New Energy Finance  
\* Assuming EV's represent 38% of new car sales in Europe by 2040 + EV's are fully emission free  
\*\* Assuming annual energy efficiency improvement of 2% in light-duty, 0,5% in heavy-duty

# Cost competitive and flexible asset base

## Power generation breakdown



# Cost efficient power generation enables robust profitability also in challenging market environment



UPM Energy profitability	2012	2013	2014	2015	2016	H117
Comparable EBIT, EURm	217	186	202	181	116	34
% of sales	45.0	39.9	43.5	43.6	32.7	23.4

UPM Raflatac

# Self-adhesive labels in end-use





# Leading position in a growing market

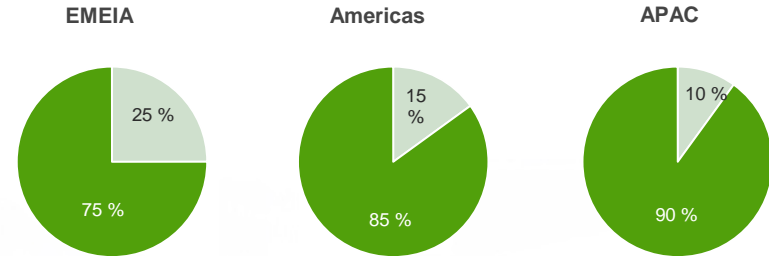
## The self adhesive labelstock market

- > EUR 8bn global market
- ~ 4% p.a. growth
- Private consumption driven

## UPM Raflatac

- #2 globally
- Business in 120 countries
- > 8,000 customers
- 3,000 people in six continents

## UPM Raflatac market shares



# Continuing growth

1. Capturing the market growth in the current markets and product areas
2. Increased distribution coverage and customer reach
3. Wider product portfolio
4. M&A when opportunities emerge

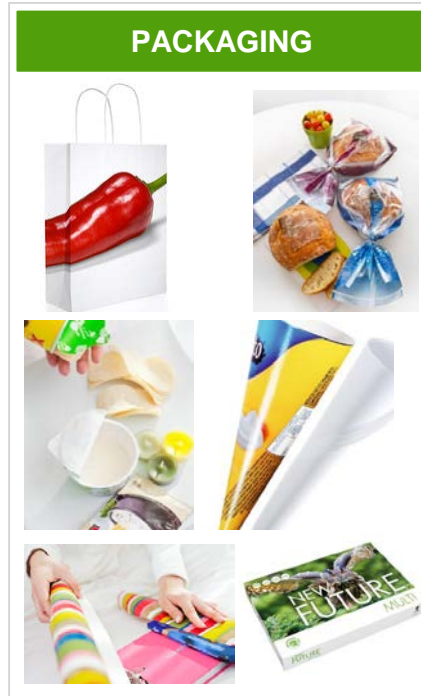
Enabled by scalable operating platform & efficient investments

Tailored marketing  
Productivity Population growth  
Single households Consumerism  
Reliability Packaged food Ease of use  
Private consumption  
Label demand  
Urbanisation E-commerce  
Sustainability Differentiation  
Retailing changes Regulation  
Higher standard of living Shelf-appeal  
Product safety

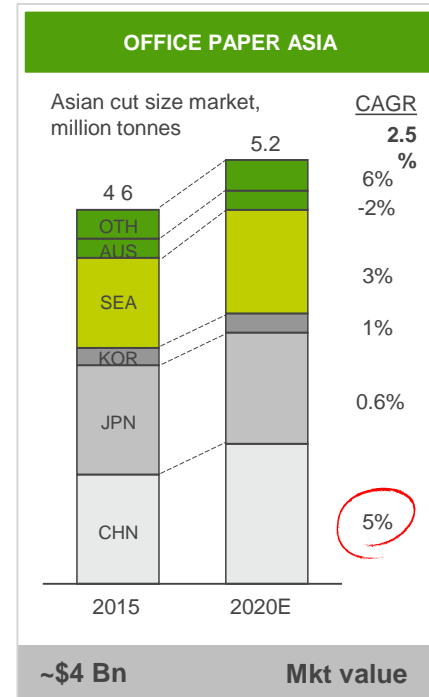
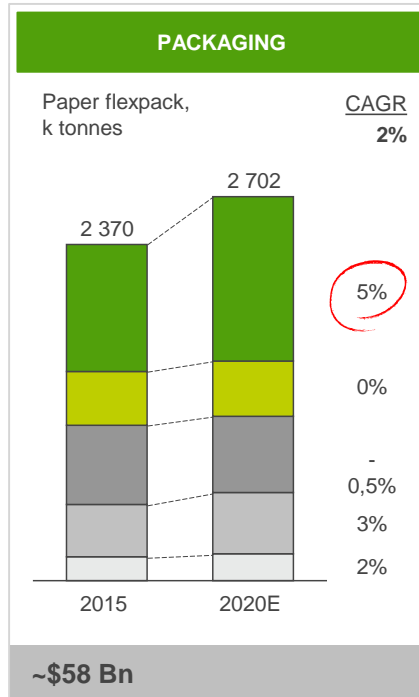
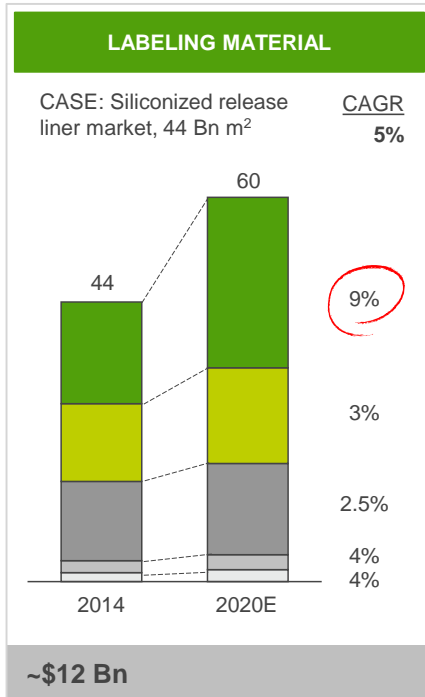


## UPM Specialty Papers

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

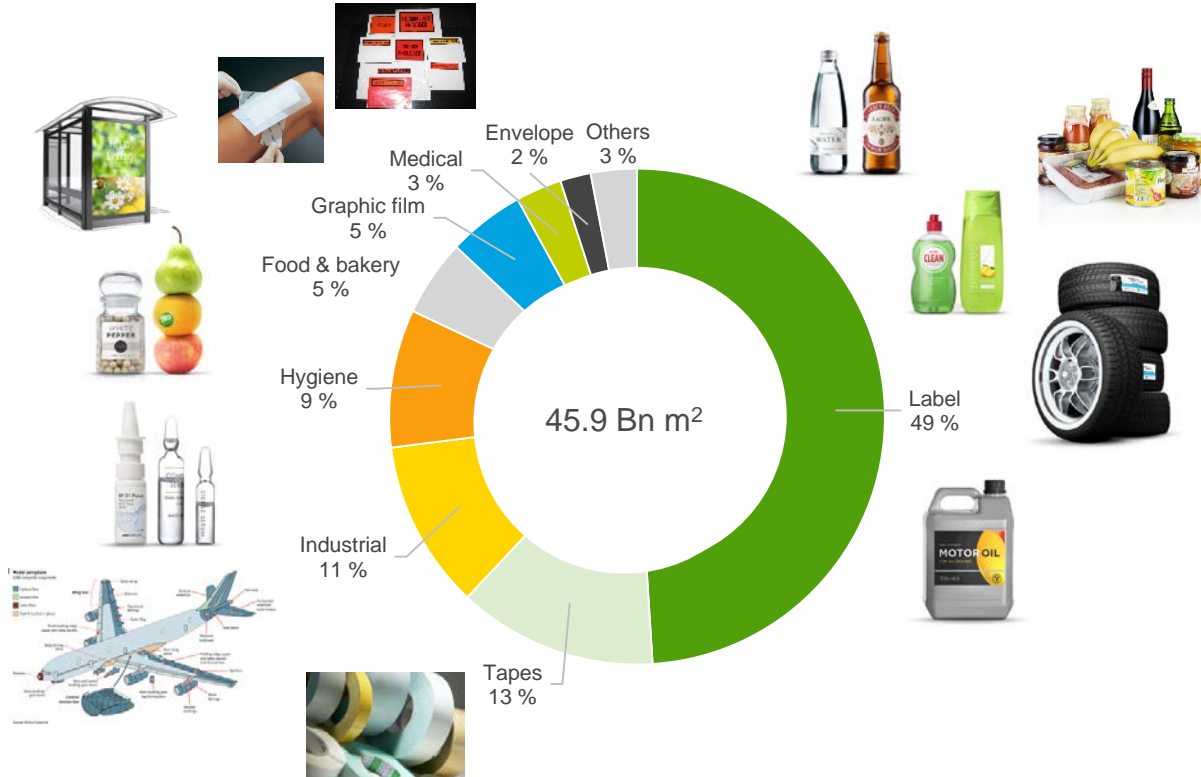


# Our end use markets are growing



■ Asia 
 ■ North America 
 ■ Europe 
 ■ South America 
 ■ MEA

# Global release liner market: Applications



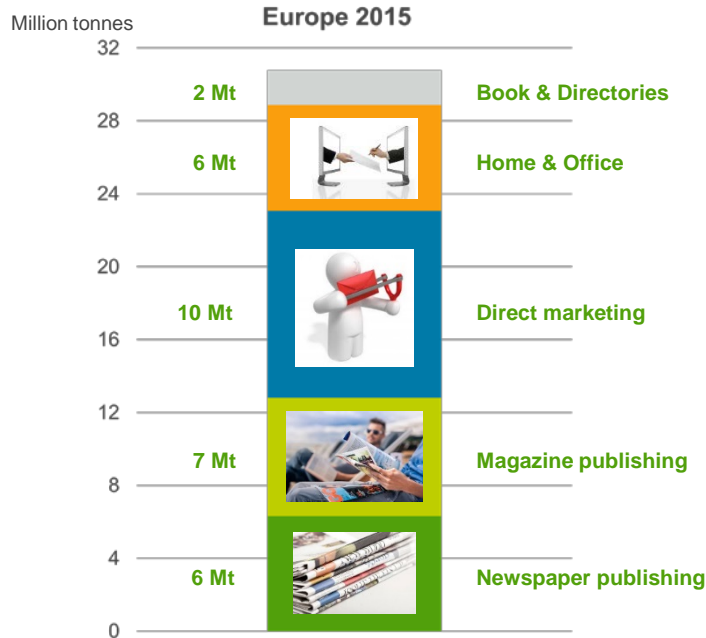
**Product functions:**

- 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

# Paper demand by end use – different trends



Source: Euro-Graph

- Historically Home & Office end-use has been the **most resilient** to structural changes
- Despite the digital alternatives personal preferences (way of working and learning), regulation (archiving) and lack of common standards have mitigated the change
- **A moderate decline** has taken place in Direct marketing end-use
- Paper based marketing is still recognized to be the **most effective medium** for retailers and cataloguers
- **Steady decline** in Magazine Publishing circulation and pagination, however number of titles increasing
- Publishers still **rely heavily on the revenues** from print
- Newspaper publishing being historically the **most vulnerable** to structural changes but remarkable differences between countries
- **Monetizing digital circulation for Magazines and Newspapers continue to be challenging**

# What does it take to perform in challenging markets?



**1** Assets

stringent capacity management



**2** Sales

profound customer- and market understanding



**3** Cost base

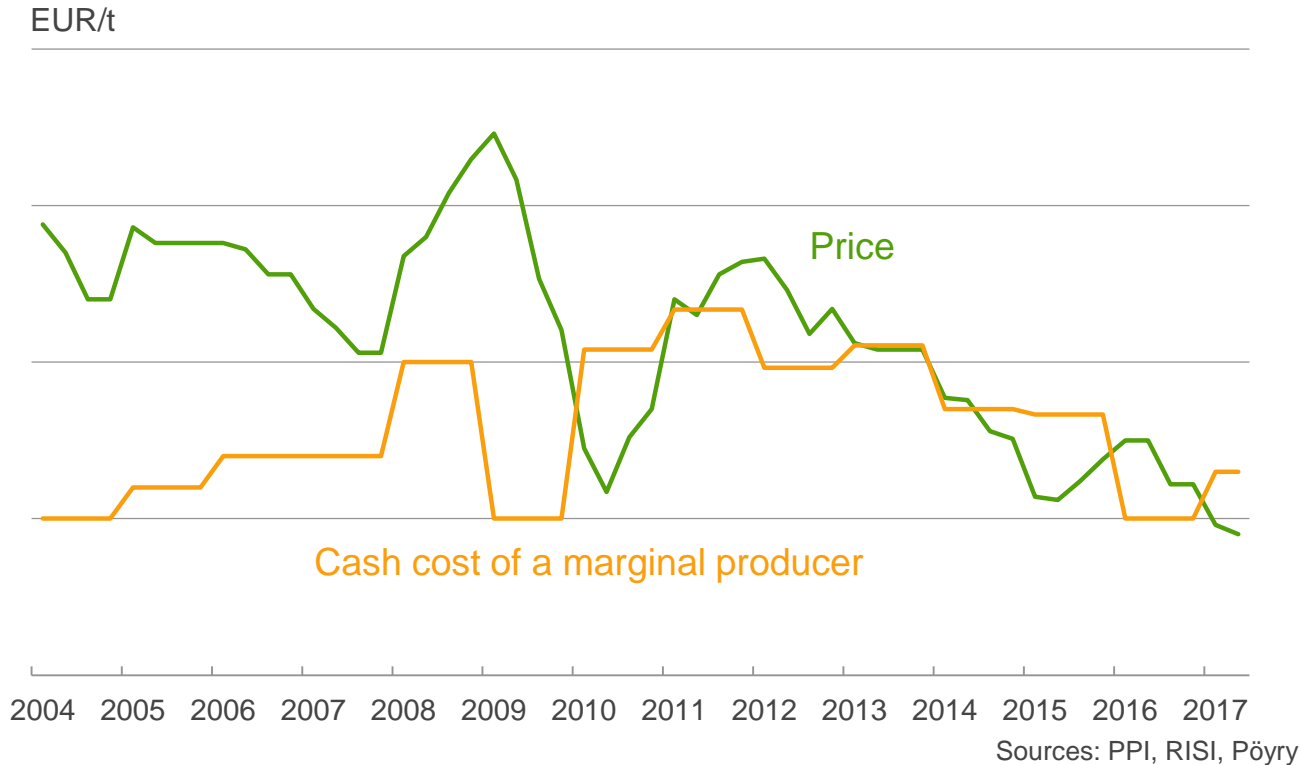
smart initiatives in push mode



**4** Cash flow

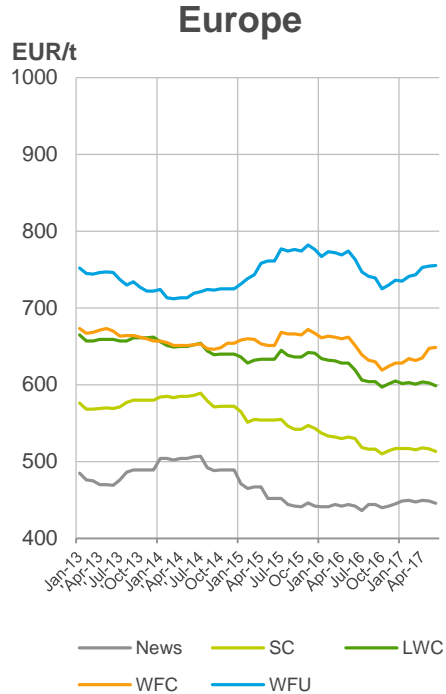
performance management and discipline

# Demand-supply balance in European graphic paper is visible in margins

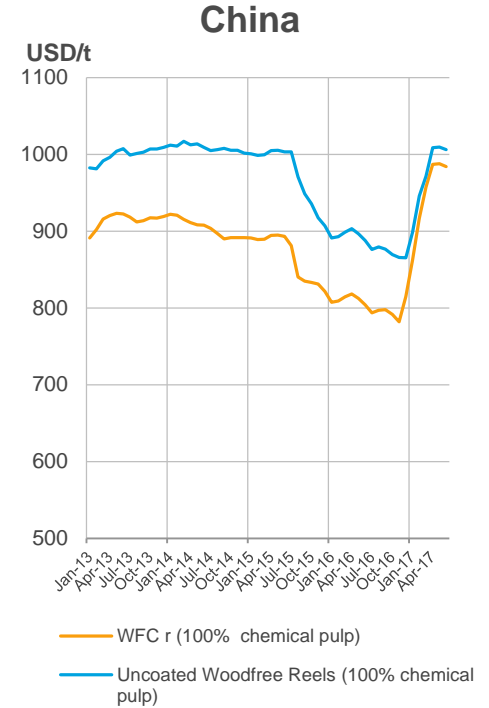
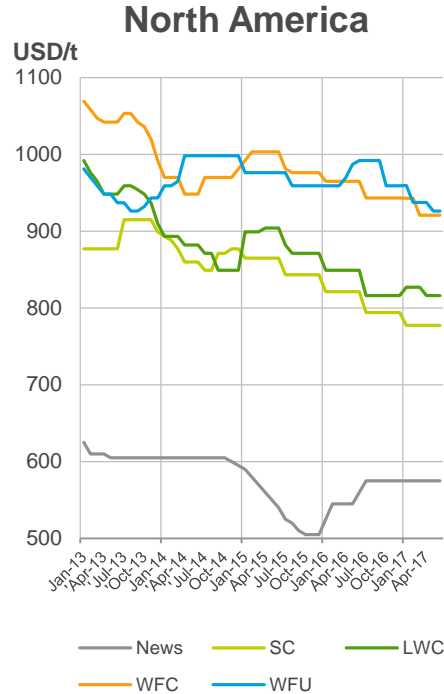




# Graphic paper prices



Sources: PPI, RISI



UPM Plywood

# UPM Plywood in end-use

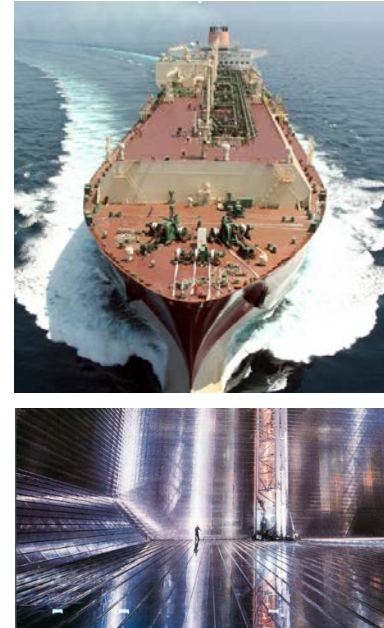
Construction



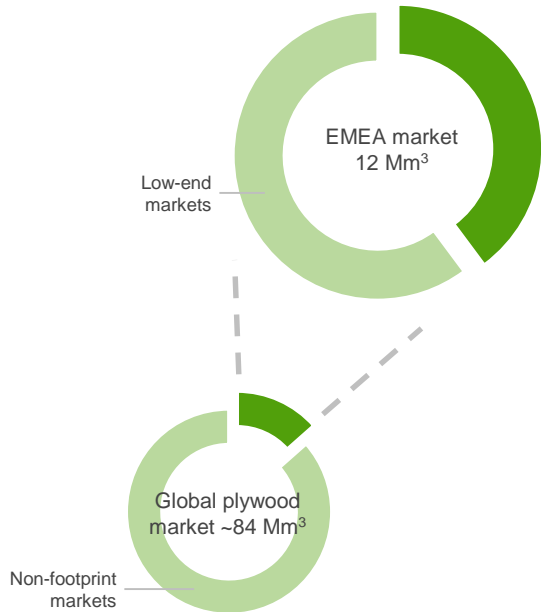
Vehicle flooring



LNG shipbuilding



# Relevant high-end market offers meaningful growth potential

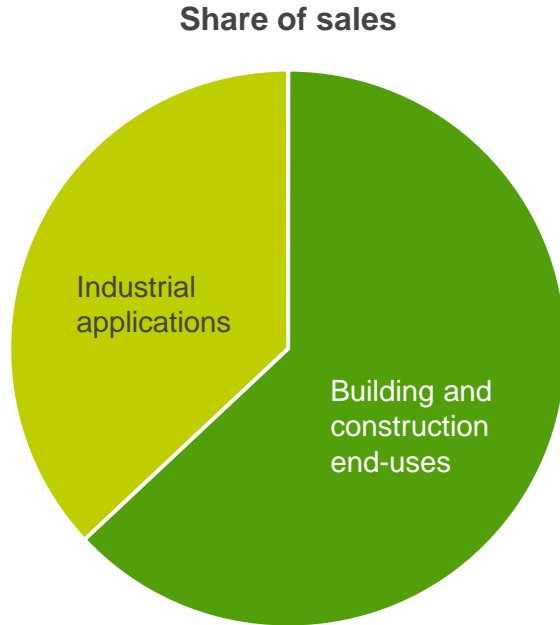


## Relevant market ~5 million m<sup>3</sup>

- High-end demanding applications & customers
- Medium range standard products
- EMEA region
- Global LNG business
  
- Europe is net importer of plywood
- Imports focus mainly on standard products in mid-low ranges

Source: FEIC; FAOSTAT; UPM

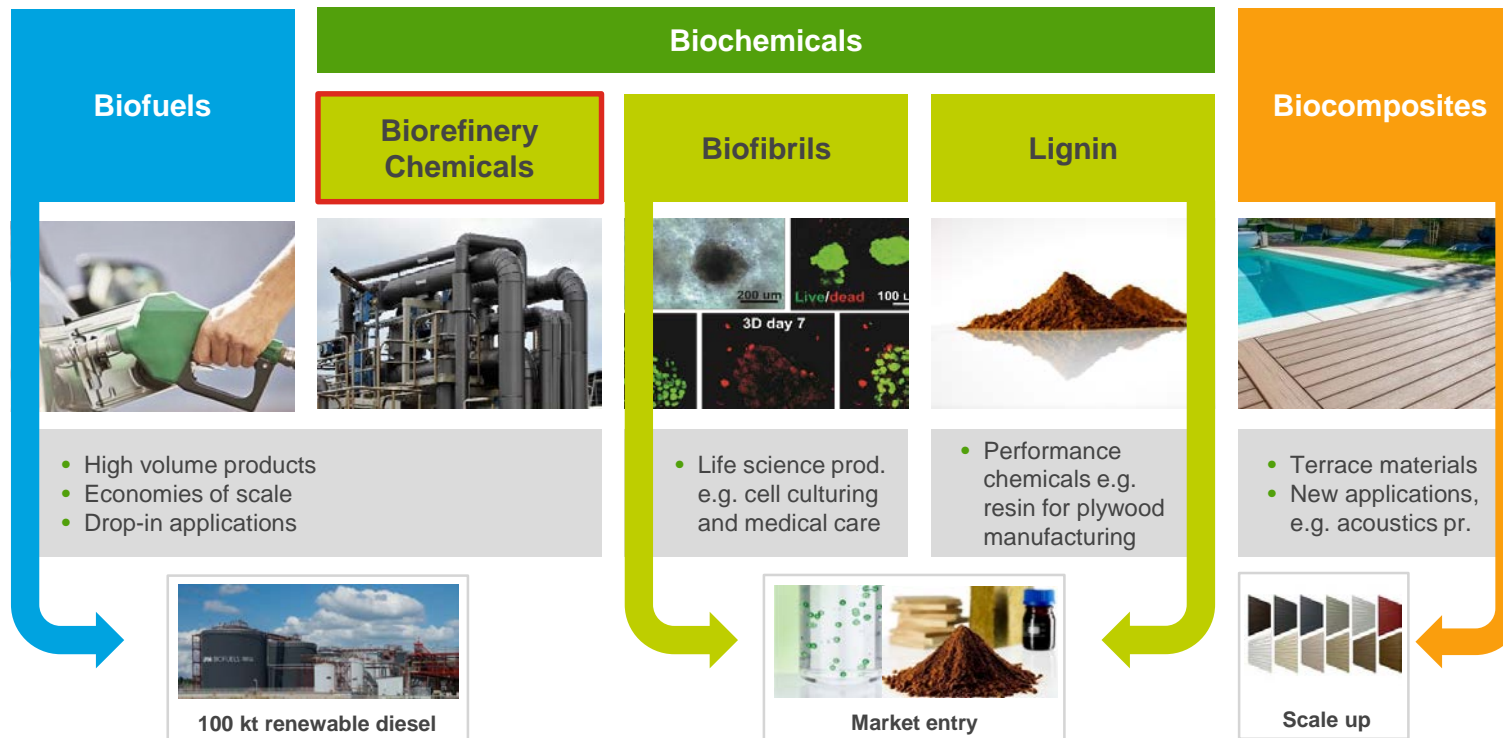
# Selected focus end-uses provide further growth potential



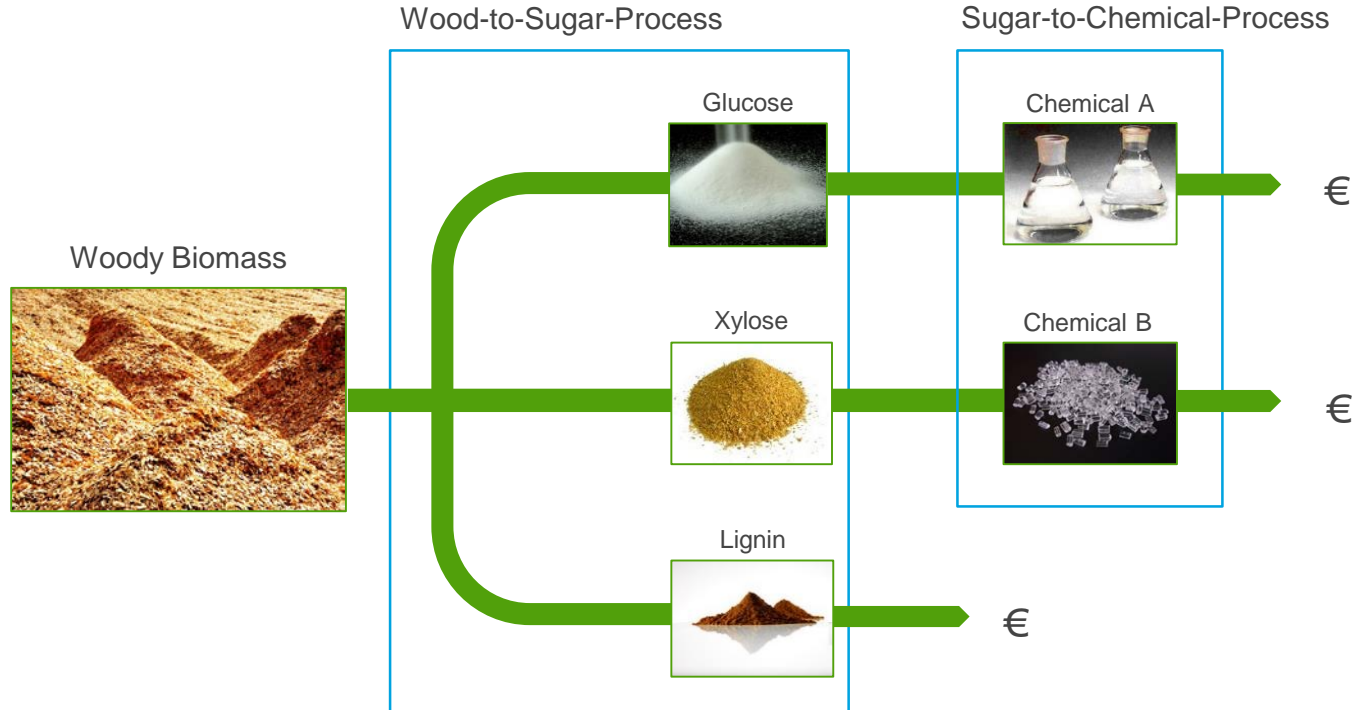
- The recovery of the European construction sector is driving demand (annual growth 2–3% p.a.)
- The financial crisis created a backlog for trailers driving the current replacement need (average growth 4% p.a.)
- The LNG market is expected to remain solid as countries secure energy availability, thereby supporting the demand for LNG vessels (existing order book for plywood based LNGC ~90 vessels)

Sources: Euroconstruct, West European trailer registrations for Big 7 Countries (1985–2016), LNG World Shipping

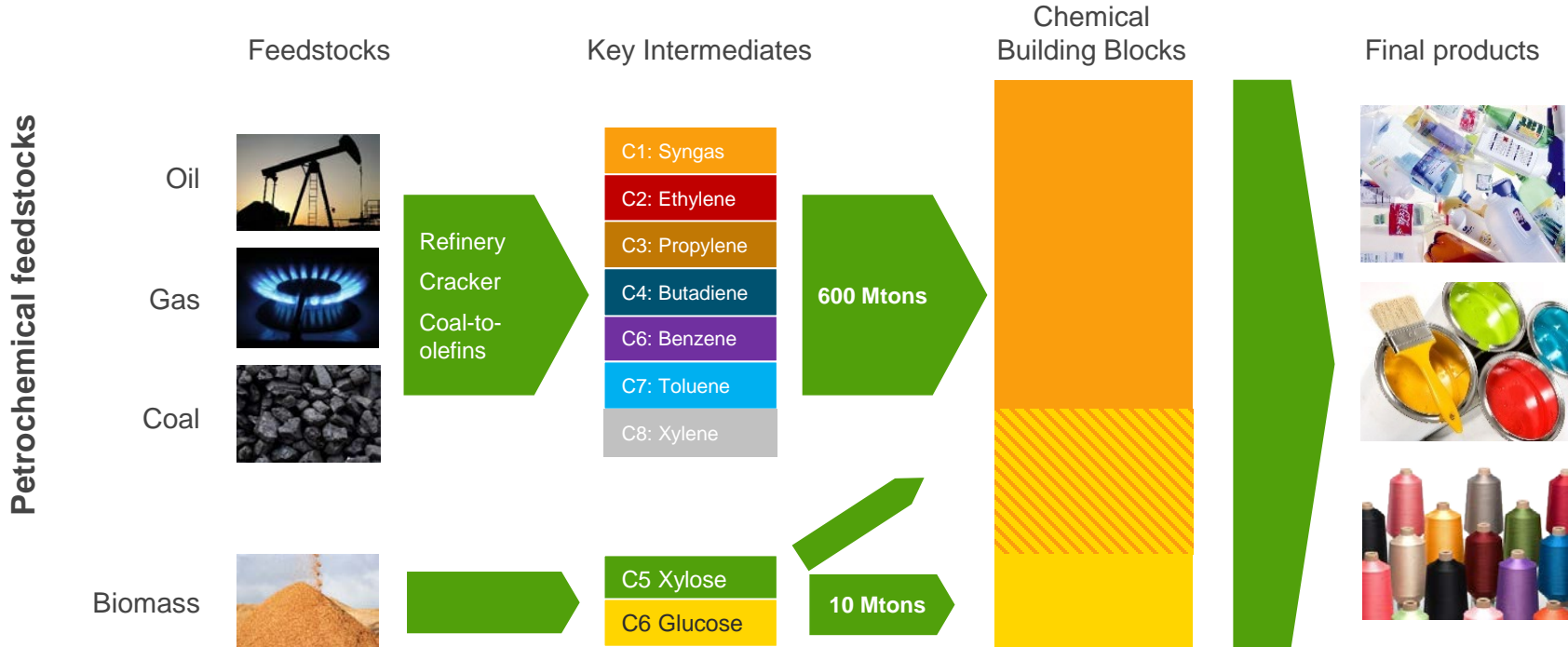
# New business opportunities for UPM



# New separation technologies ensure best overall value capture



# Partial overlap with fossil-based value chains in chemicals





**UPM**

The Biofore  
Company