

UPM – THE BIOFORE COMPANY

Investor presentation
March 2017



UPM today



UPM BIOREFINING

Pulp
Plantations
Biofuels
Sawmills
Wood Sourcing and
Forestry



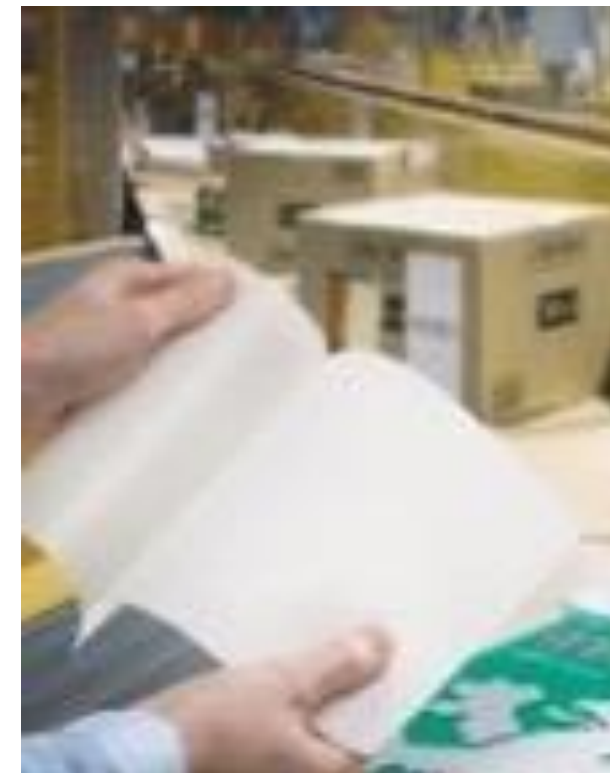
UPM ENERGY

Hydro-, nuclear- and
condensing power (incl.
shares in energy
companies)
Electricity production
and trading



UPM RAFLATAC

Label materials for
product and
information labelling



UPM SPECIALTY PAPERS

Fine papers in China
and APAC
Labelling materials
globally



UPM PAPER ENA

Magazine papers,
newsprint and fine
papers for various end-
uses



UPM PLYWOOD

WISA® plywood and
veneer products
UPM Grada® wood
material



UPM BIOCOMPOSITES

UPM ProFi
UPM Formi

UPM BIOCHEMICALS

Chemical building blocks
Lignin products
Biofibrils
Biomedical products

Global businesses – local presence

UPM's sales by market 2016
EUR 9,812 million



54
production plants
in **12** countries



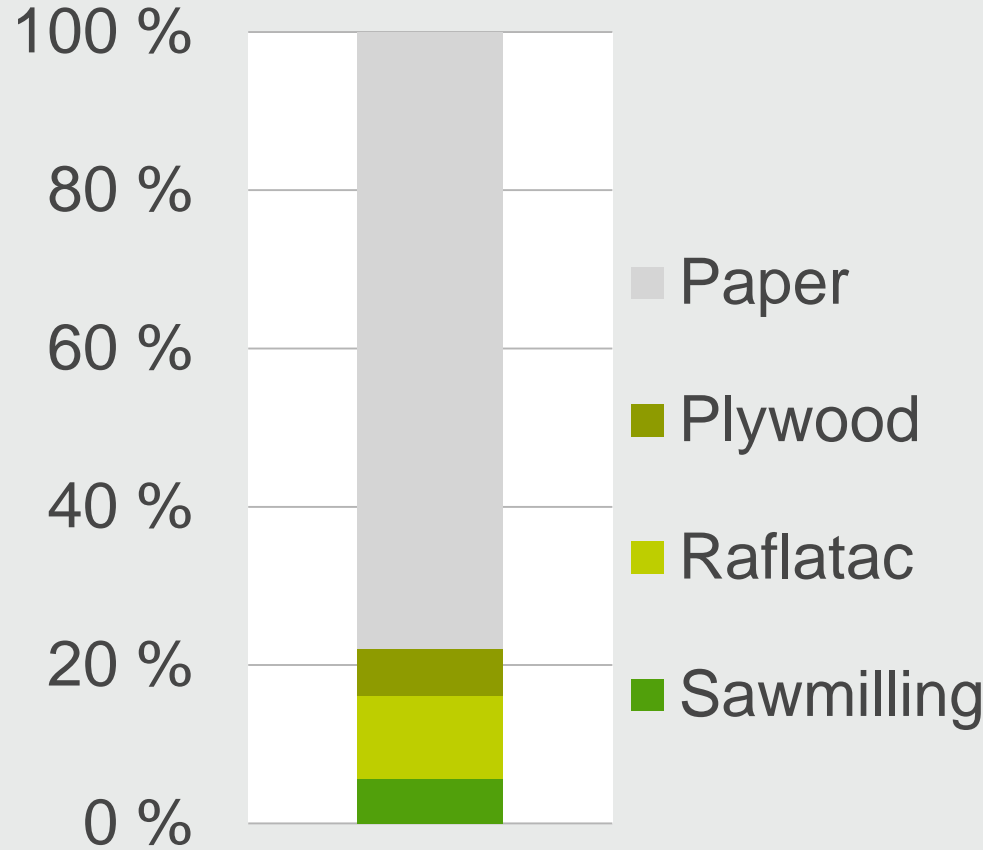
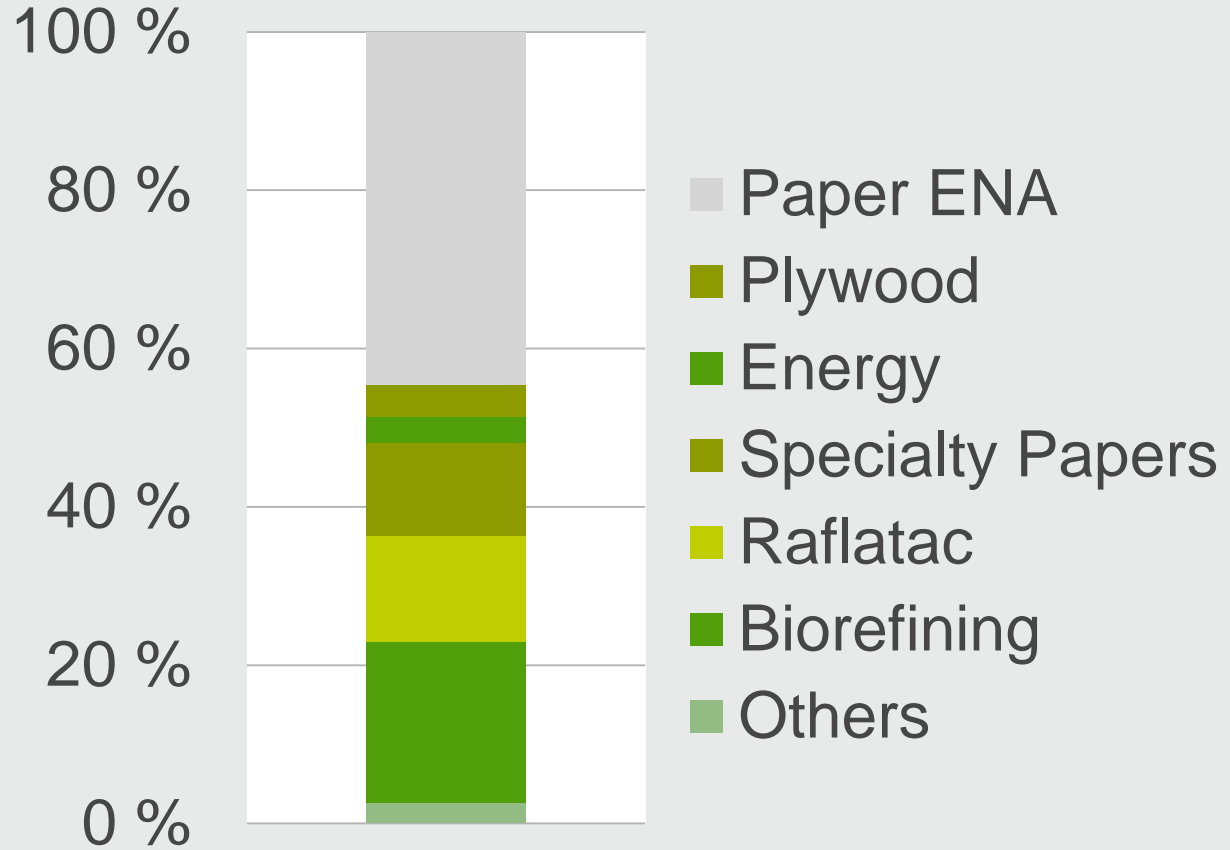
19,300
employees
in **45** countries

12,000
customers
in **120** countries

85,000
shareholders
in **40** countries

55,000
suppliers
in **70** countries

UPM in transformation

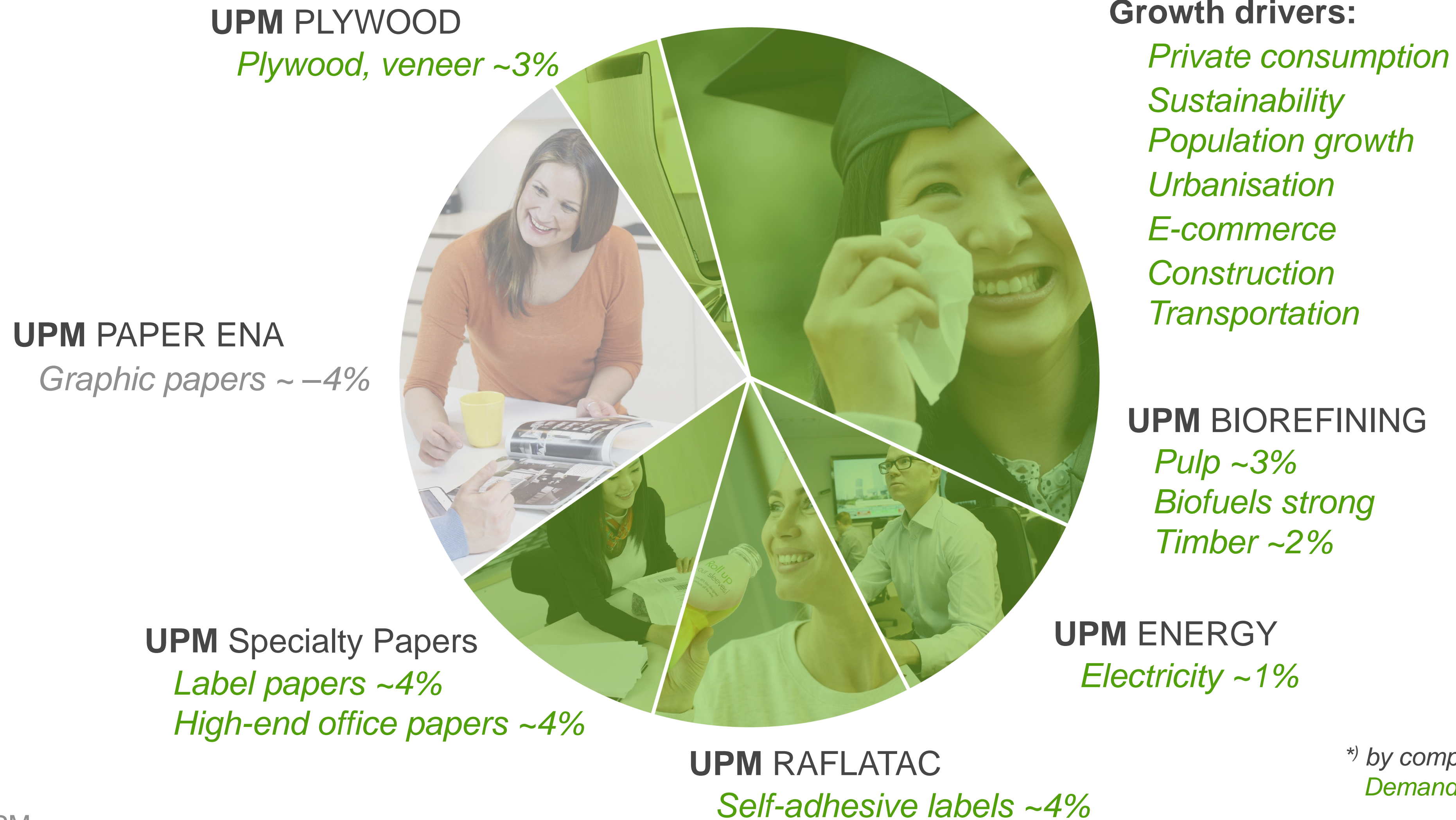
	2008 vertically integrated paper company	2016 six separate businesses	Business model Promotes value creation
Sales			Business portfolio Increasing share of businesses with strong long-term fundamentals for profitability and growth
Sales	EUR 9.5bn	EUR 9.8bn	Business performance
EBIT *)	EUR 513m	EUR 1,143m	Continuous improvement in financial, social and environmental performance
ROE *)	3.5%	10.9%	
Net debt	EUR 4.3bn	EUR 1.1bn	Disciplined capital allocation
Market cap	EUR 4.7bn	EUR 12.5bn	Driving value creation

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

UPM business portfolio today*)

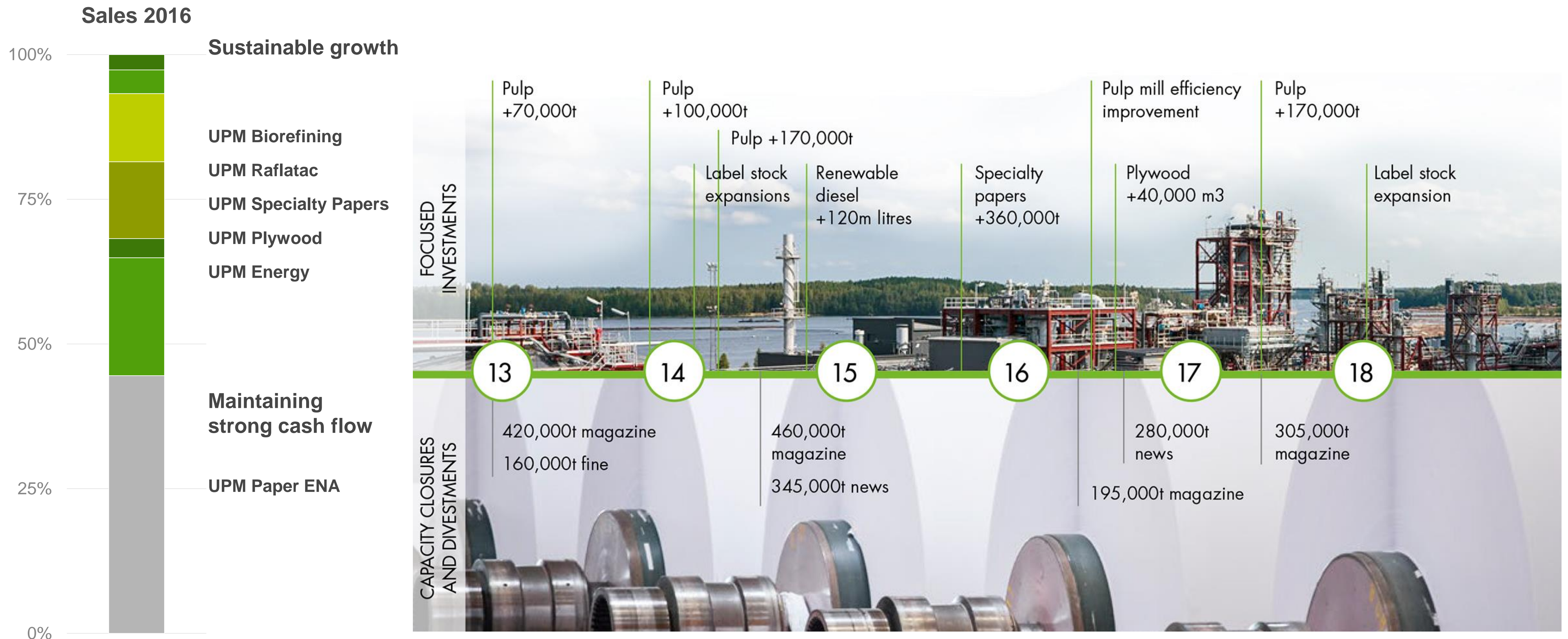
Competitive businesses with strong market positions

Operating on healthily growing markets



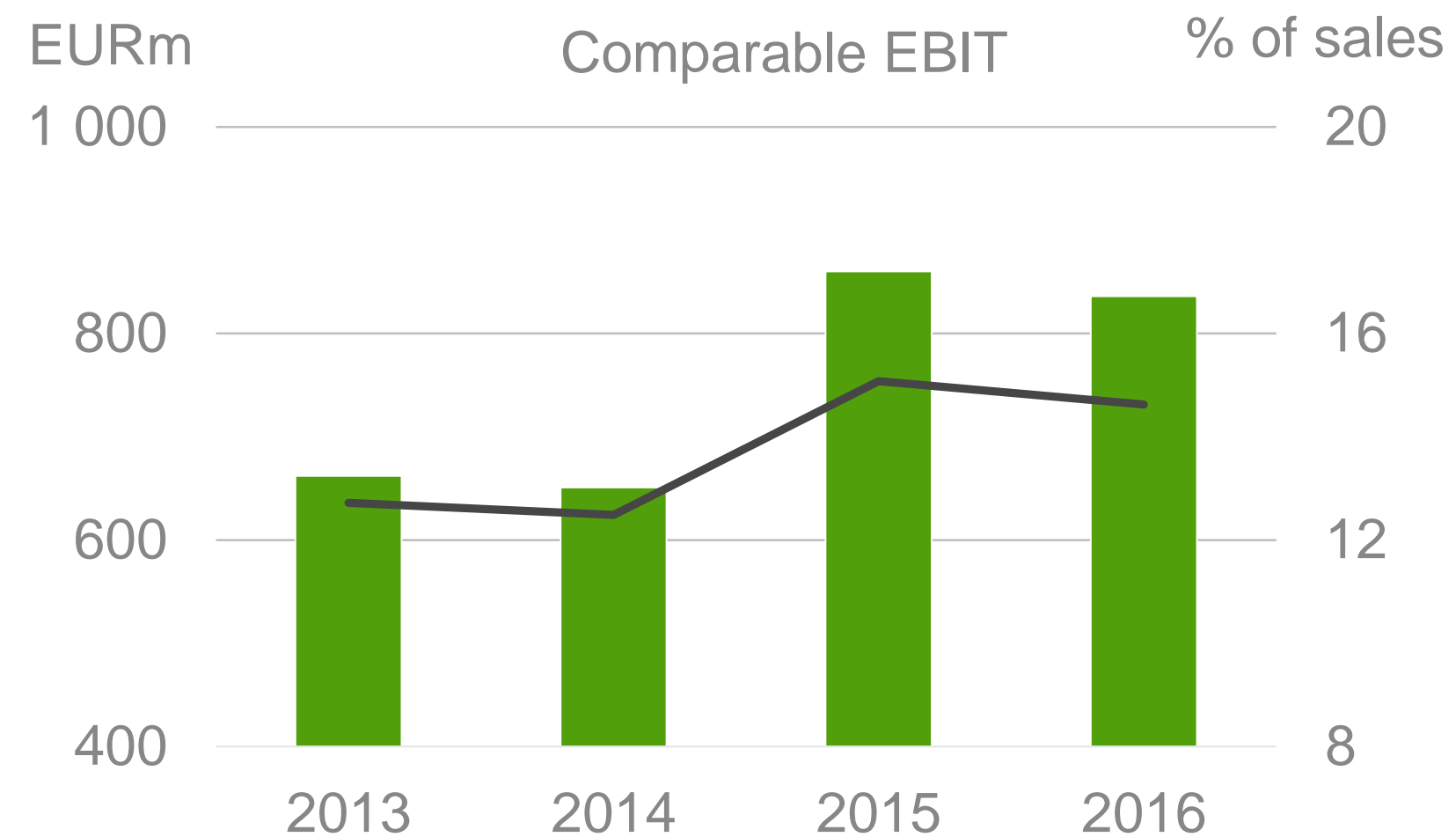
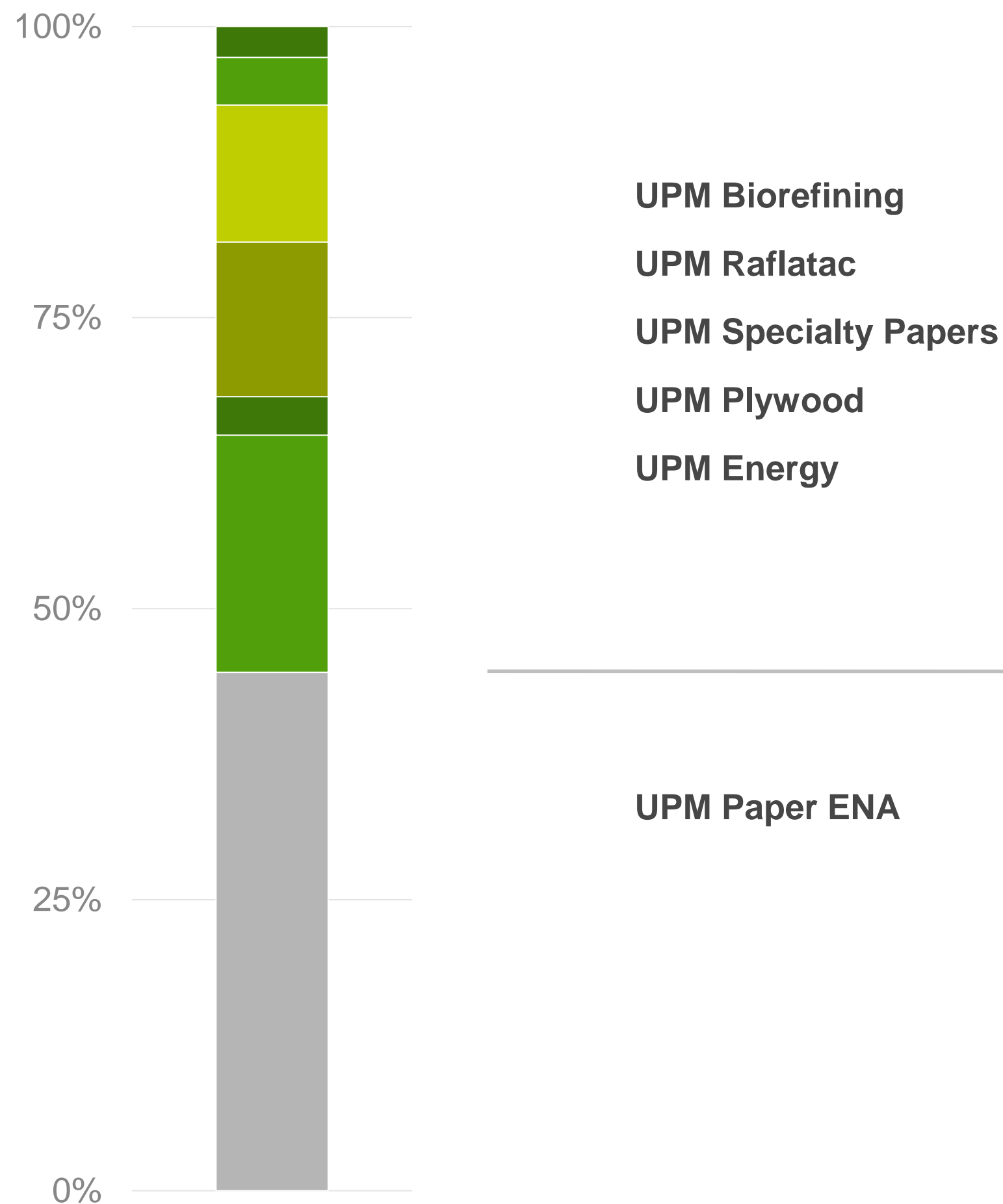
*) by comparable EBIT 2016
Demand trend growth, % pa

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



Value creation through sustainable growth and cash generation

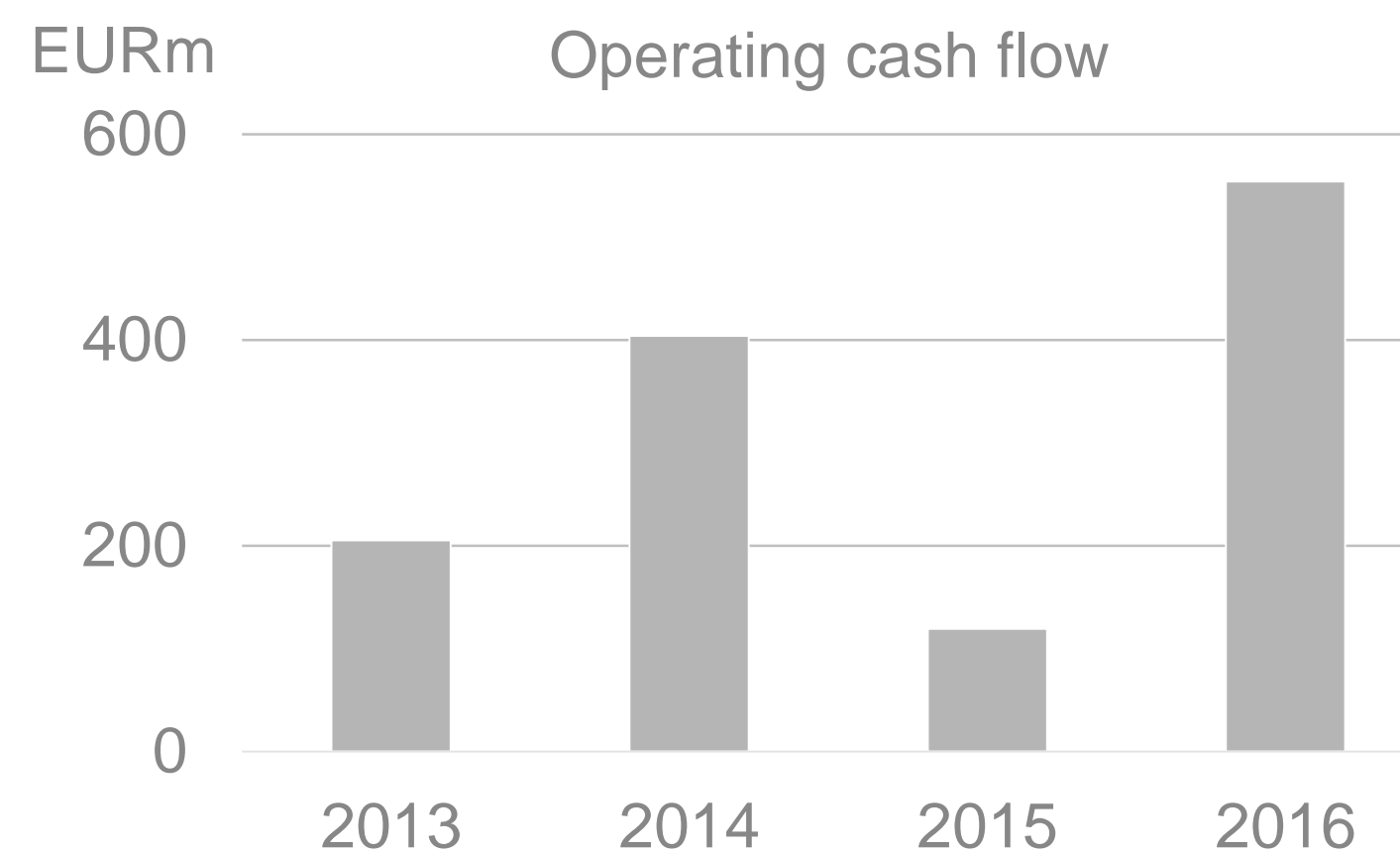
Sales 2016



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

Focused growth investments contributed significantly to 2016 results



Fully contributing in 2016

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

80% run-rate of the EUR 200m EBITDA target achieved in 2016



Further optimisation potential

- Lappeenranta biorefinery
- Changshu speciality papers

Ramp-up in progress

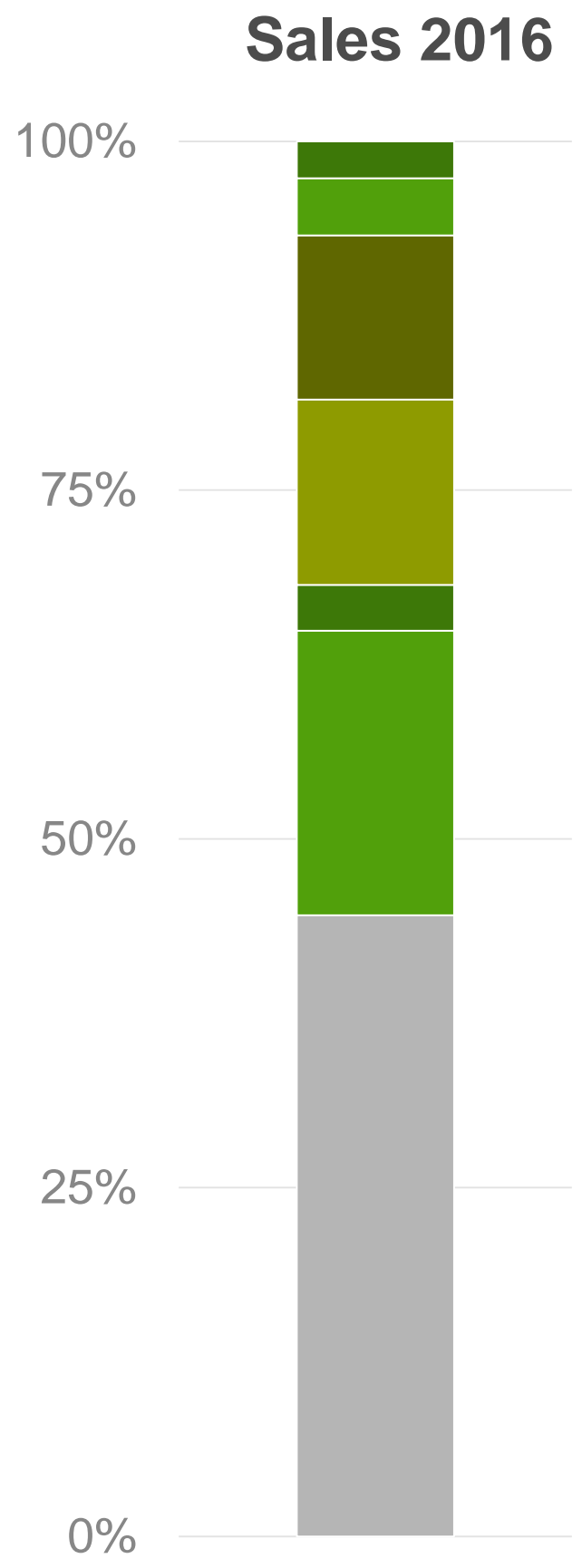
- Otepää plywood mill expansion
- Kaukas pulp mill efficiency



Under construction

- Kymi pulp mill expansion
- Raflatac expansion in Poland

Focused investments are delivering growth



Average delivery growth 2011 –2016

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



Financial performance in 2016 – disciplined capital allocation in action

Top performance

Comparable EBIT

EUR **1,143m**

+25%

Comparable ROE

10.9%

+1.4pp

5/6

business areas
achieved their
financial targets



Strong cash flow

Operating cash flow

EUR **1,686m**

+42%

Focused investments

Capital expenditure

EUR 325m

Attractive returns

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

Attractive dividend

Dividend (proposal)

EUR **507m**

+27%

Net debt reduction
EUR 969m, -46%

Industry-leading balance sheet

Net debt/EBITDA

0.73x



New long-term financial targets

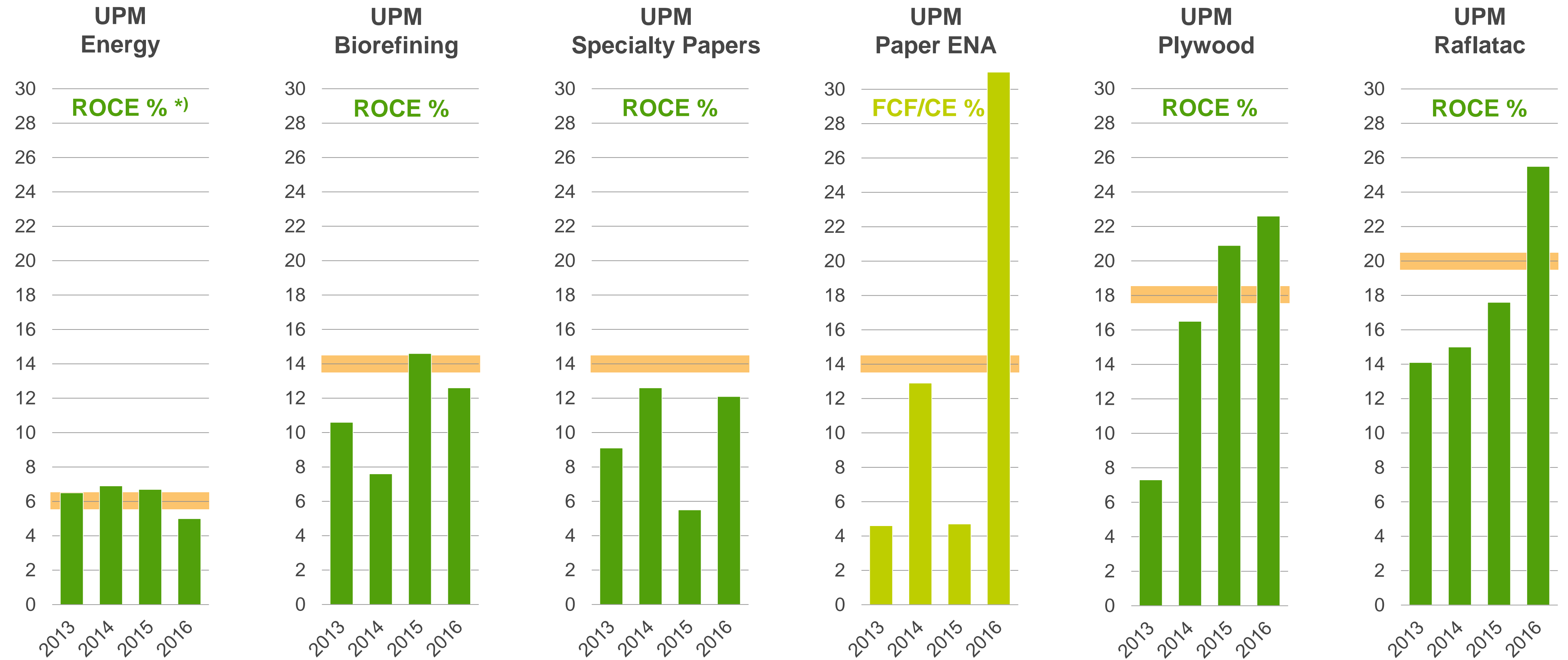
Business area targets

Business area	Return target
UPM Energy	ROCE 6%
UPM Biorefining	ROCE 14%
UPM Specialty Papers	ROCE 14%
UPM Paper ENA	FCF/CE 14%
UPM Plywood	ROCE 18%
UPM Raflatac	ROCE 20%

UPM group targets

- **Comparable EBIT growth** through focused top-line growth and margin expansion
- **Comparable ROE: 10%**
- **Net debt / EBITDA:** around 2x or less
- **Dividend policy:** 30-40% of operating cash flow per share

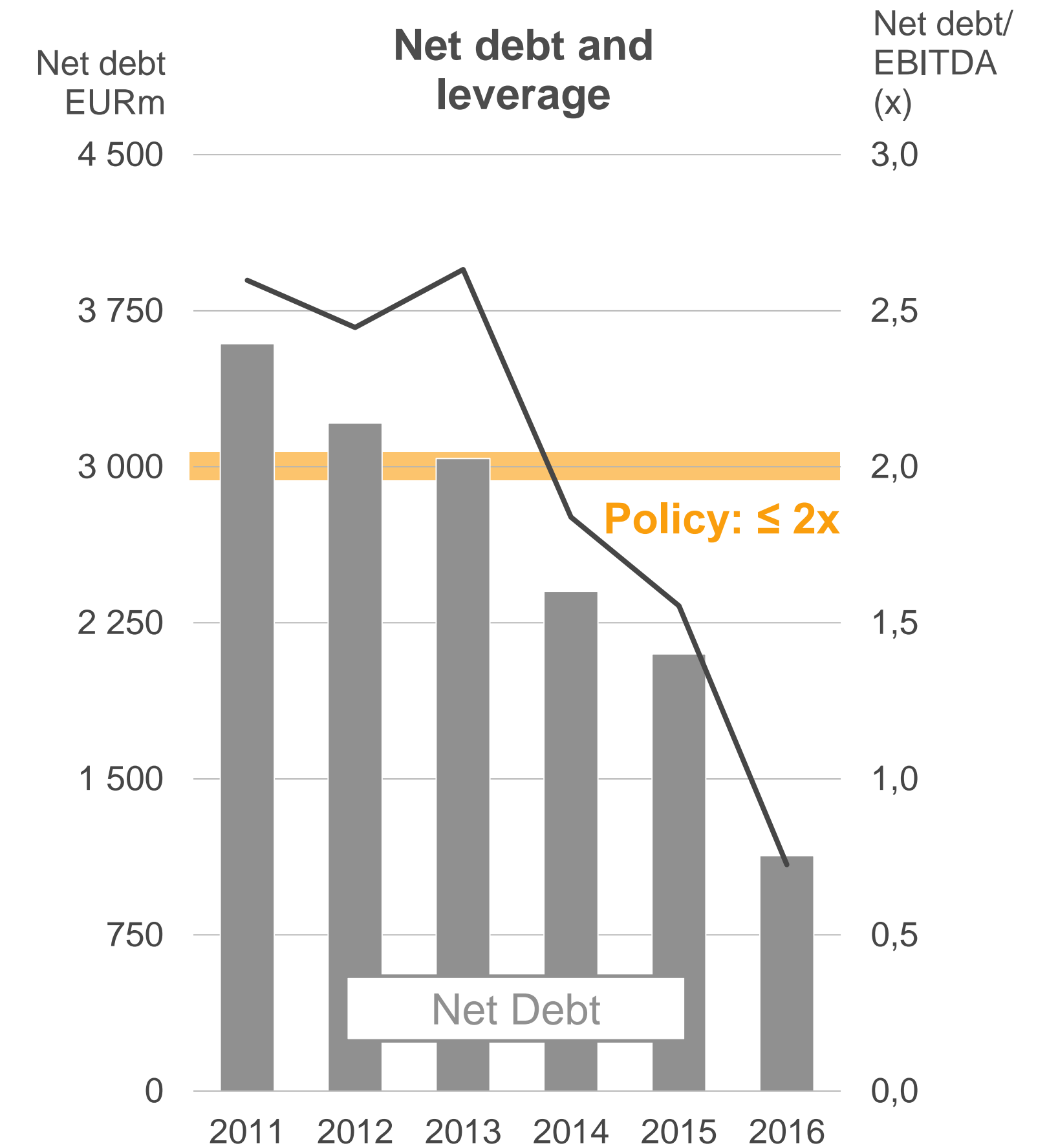
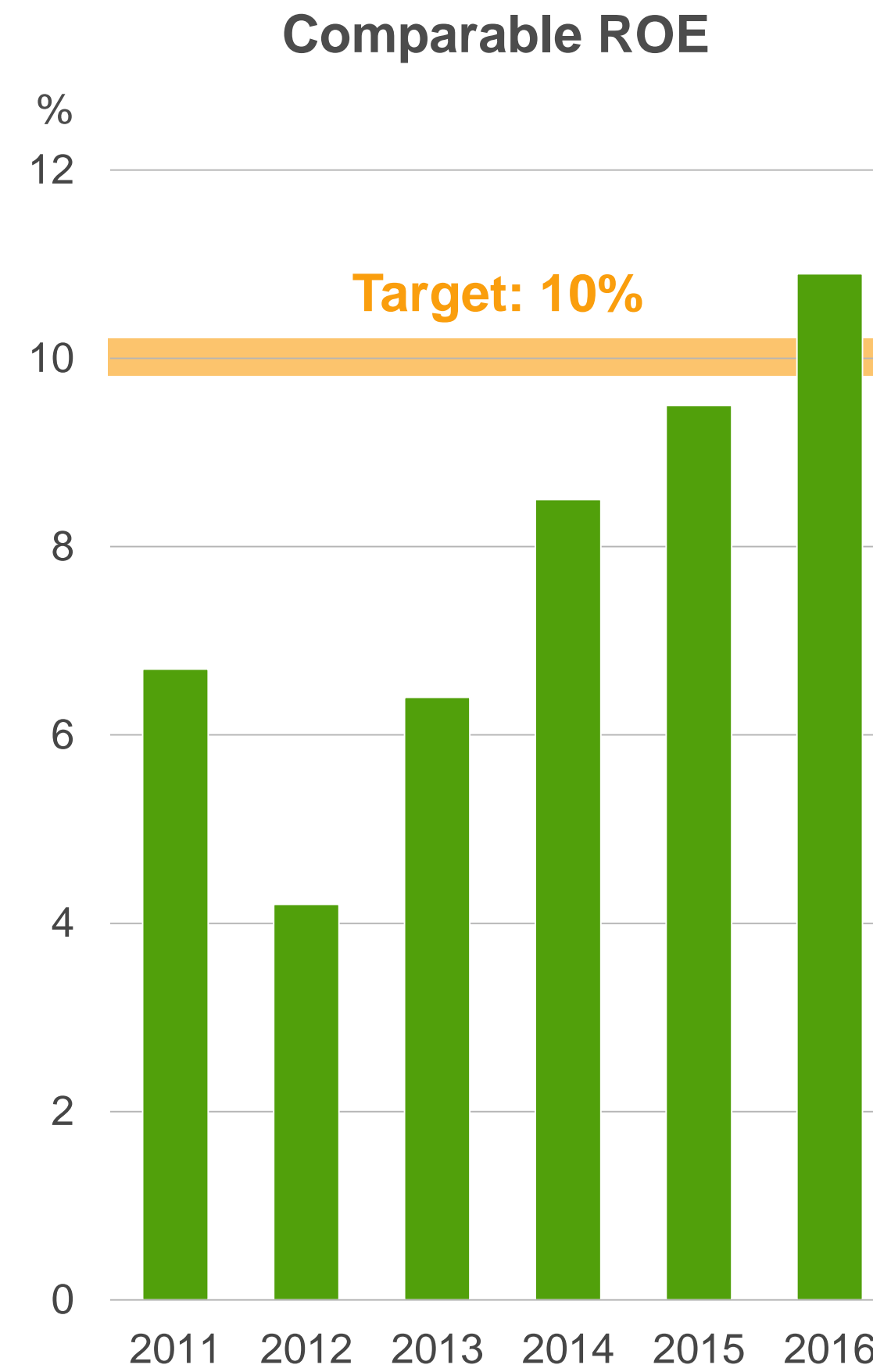
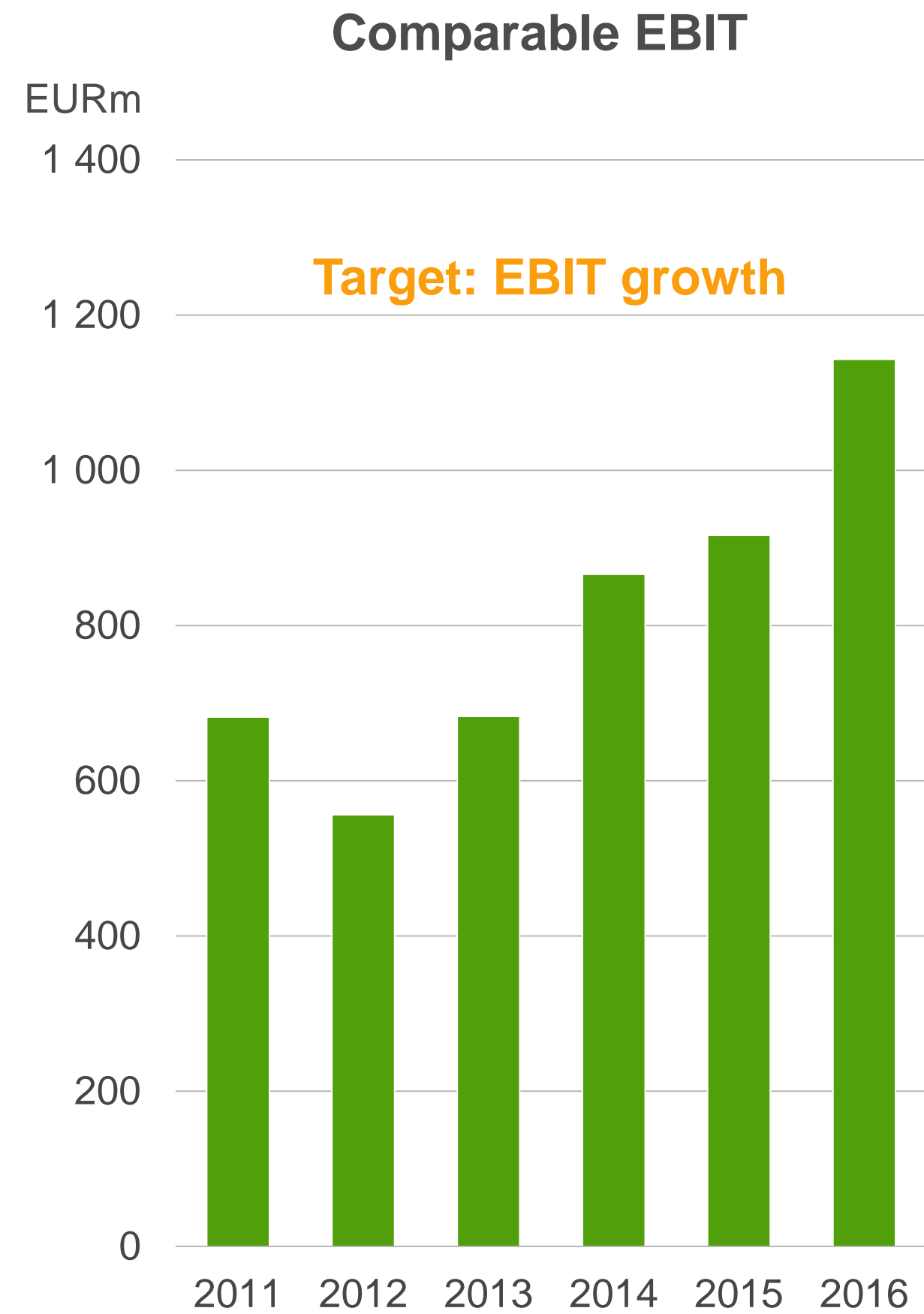
Business area long-term targets compared with realised returns



*) shareholdings in UPM Energy valued at fair value

 Long-term return target

Group financial performance

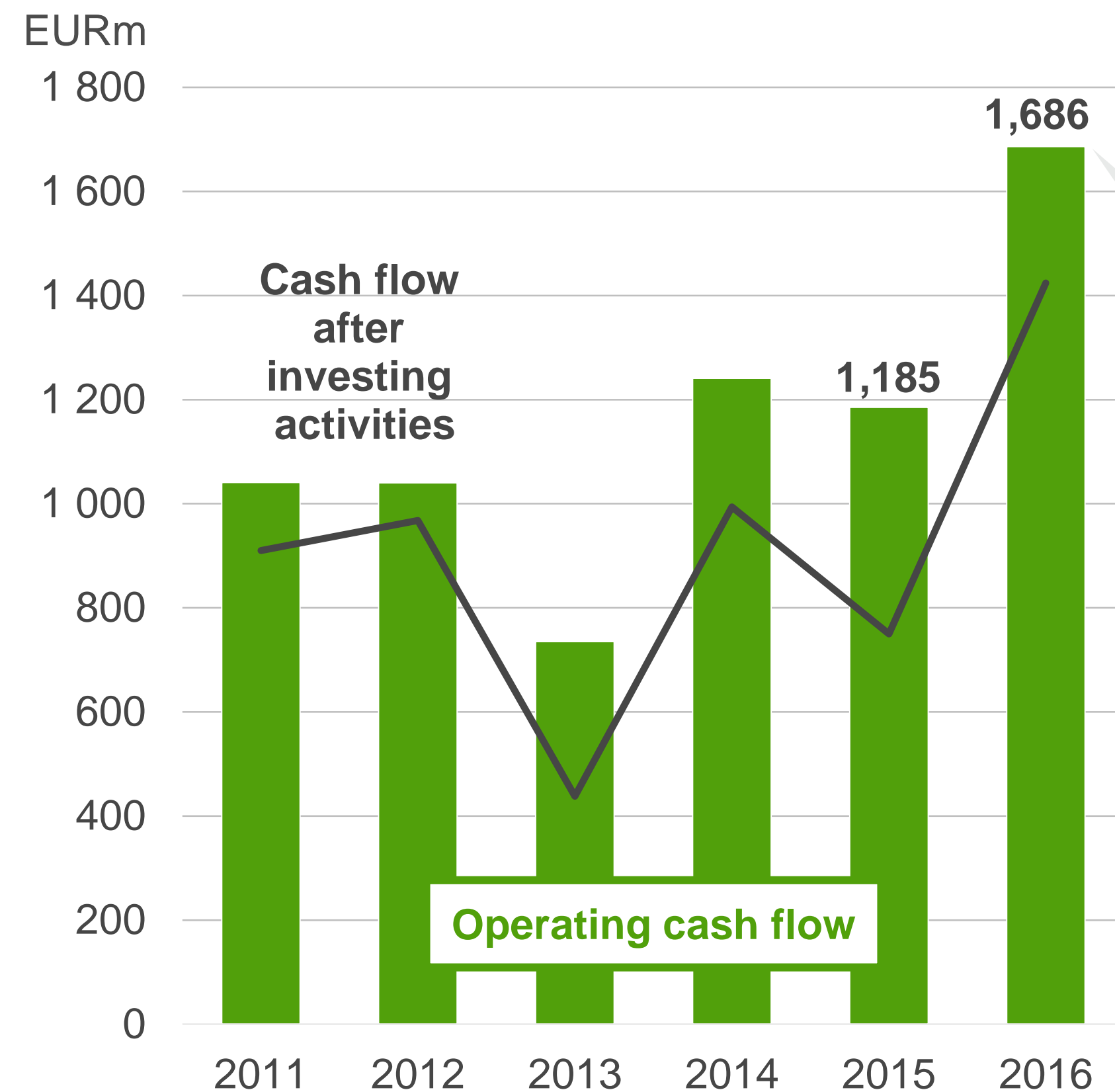


Comparable figures for 2015 and 2014, excluding special items for earlier years



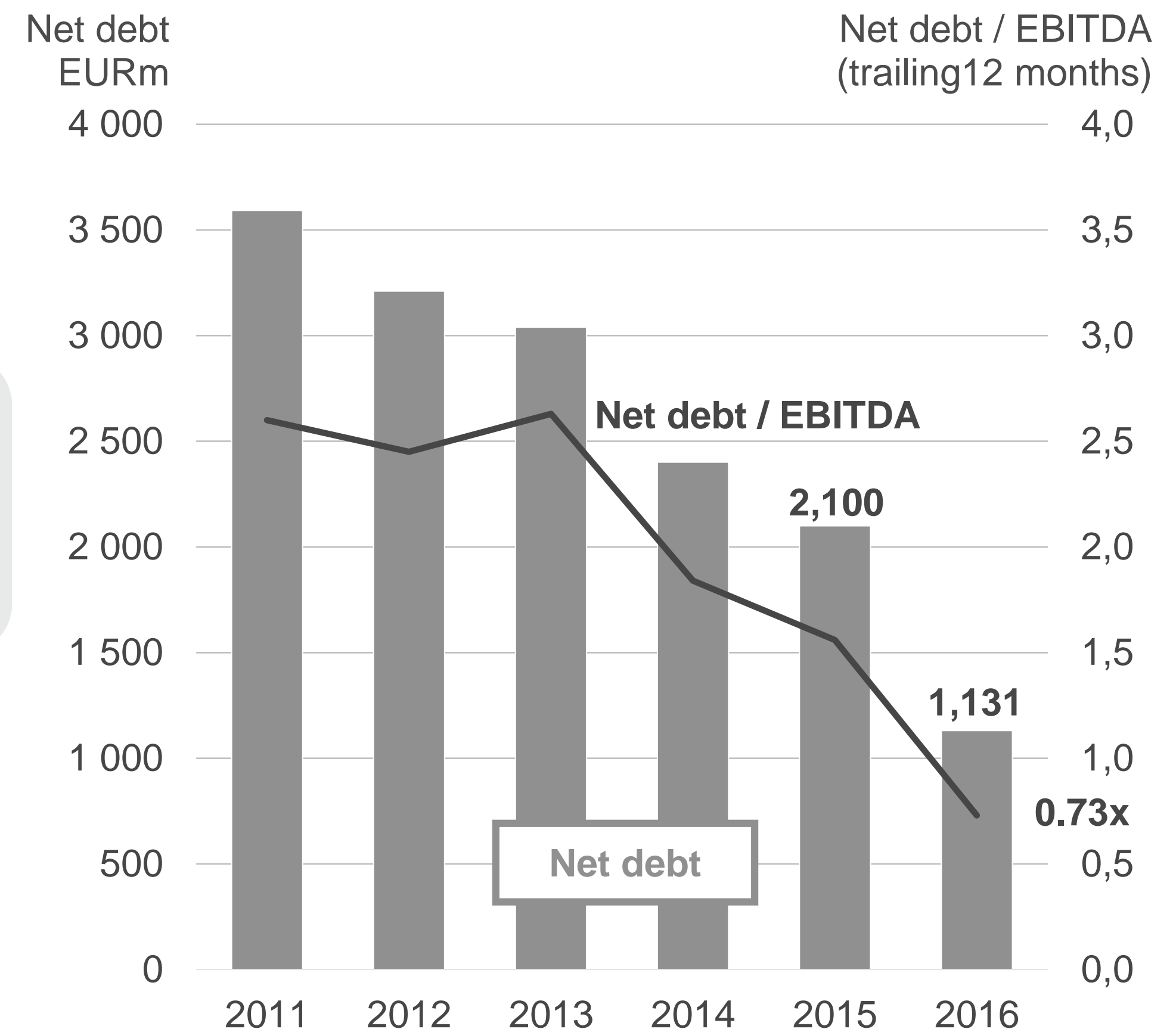
Record strong cash flow and balance sheet

Operating cash flow

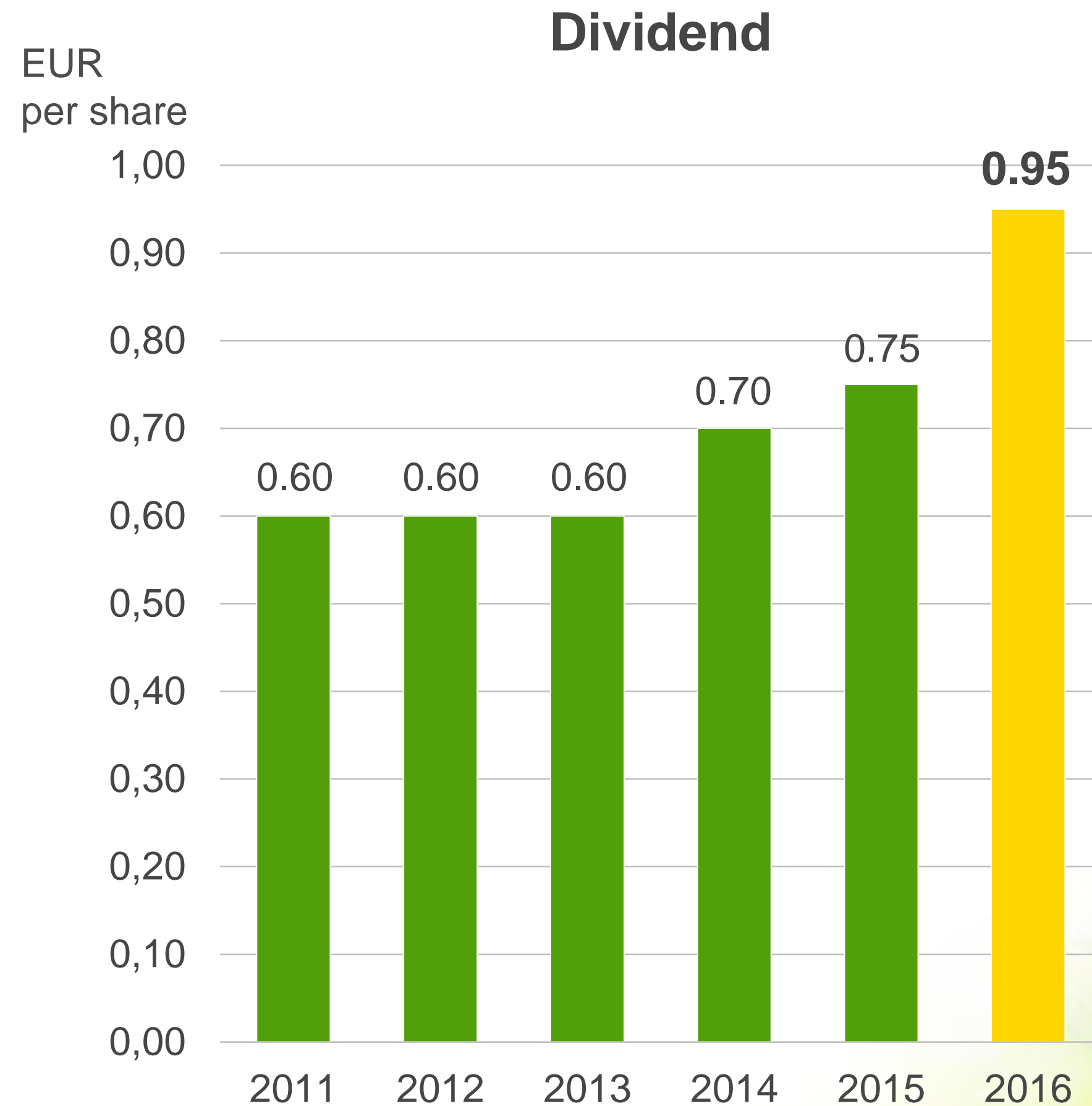


Working capital decreased by EUR 195m in 2016

Net debt



Dividend proposal



Dividend policy

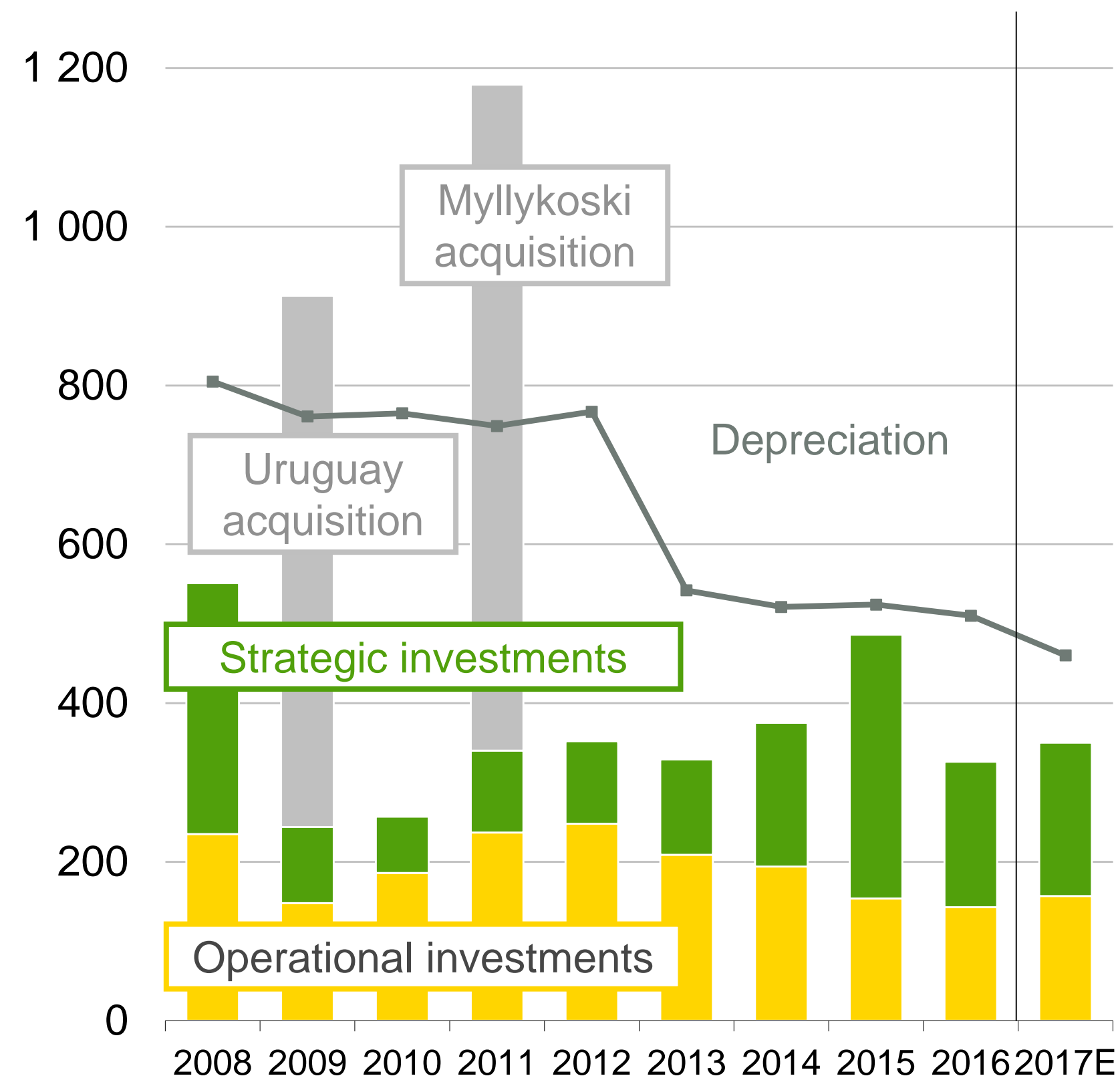
- UPM aims to pay an attractive dividend, 30–40% of operating cash flow per share

Board's dividend proposal 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

Capital expenditure



Focused growth investments

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

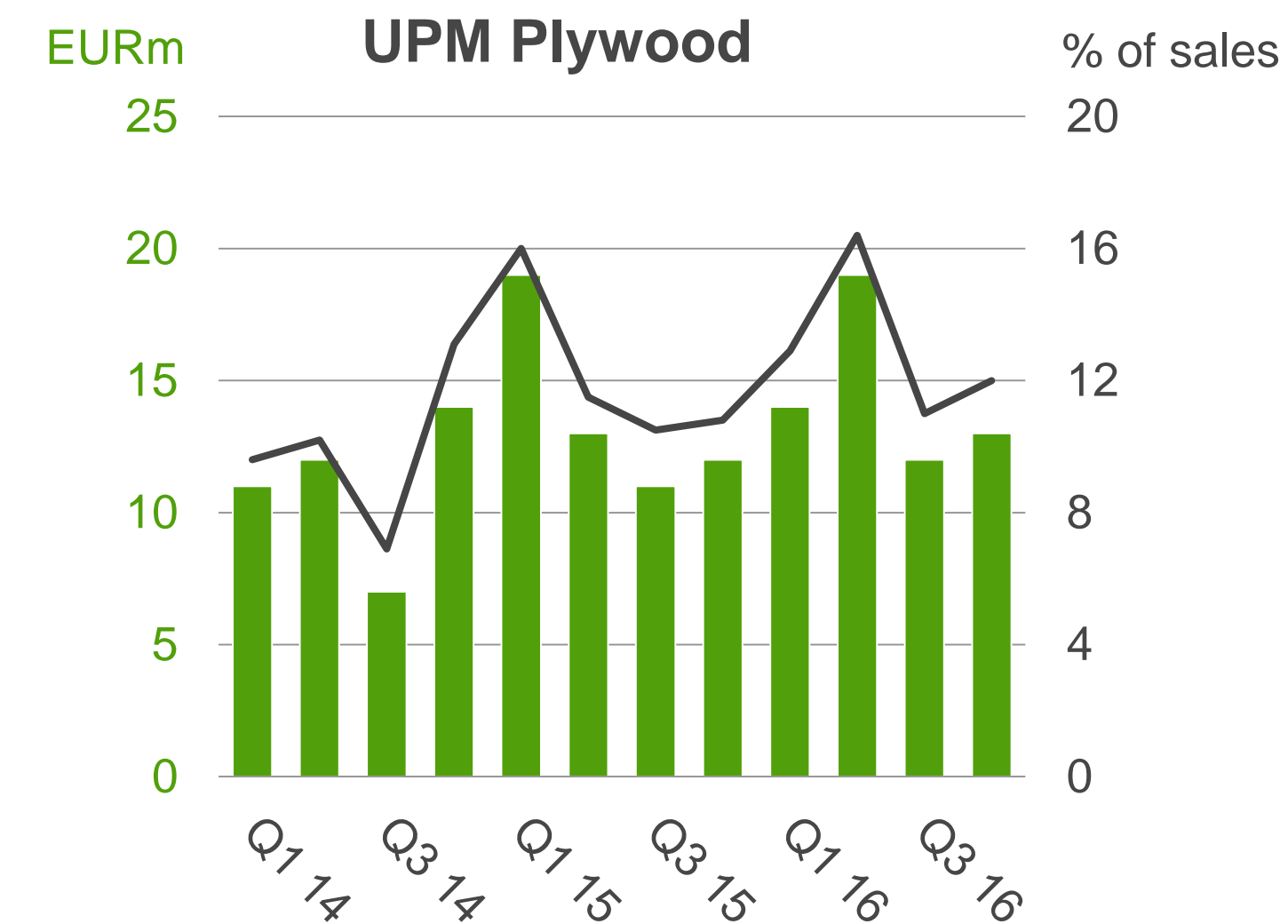
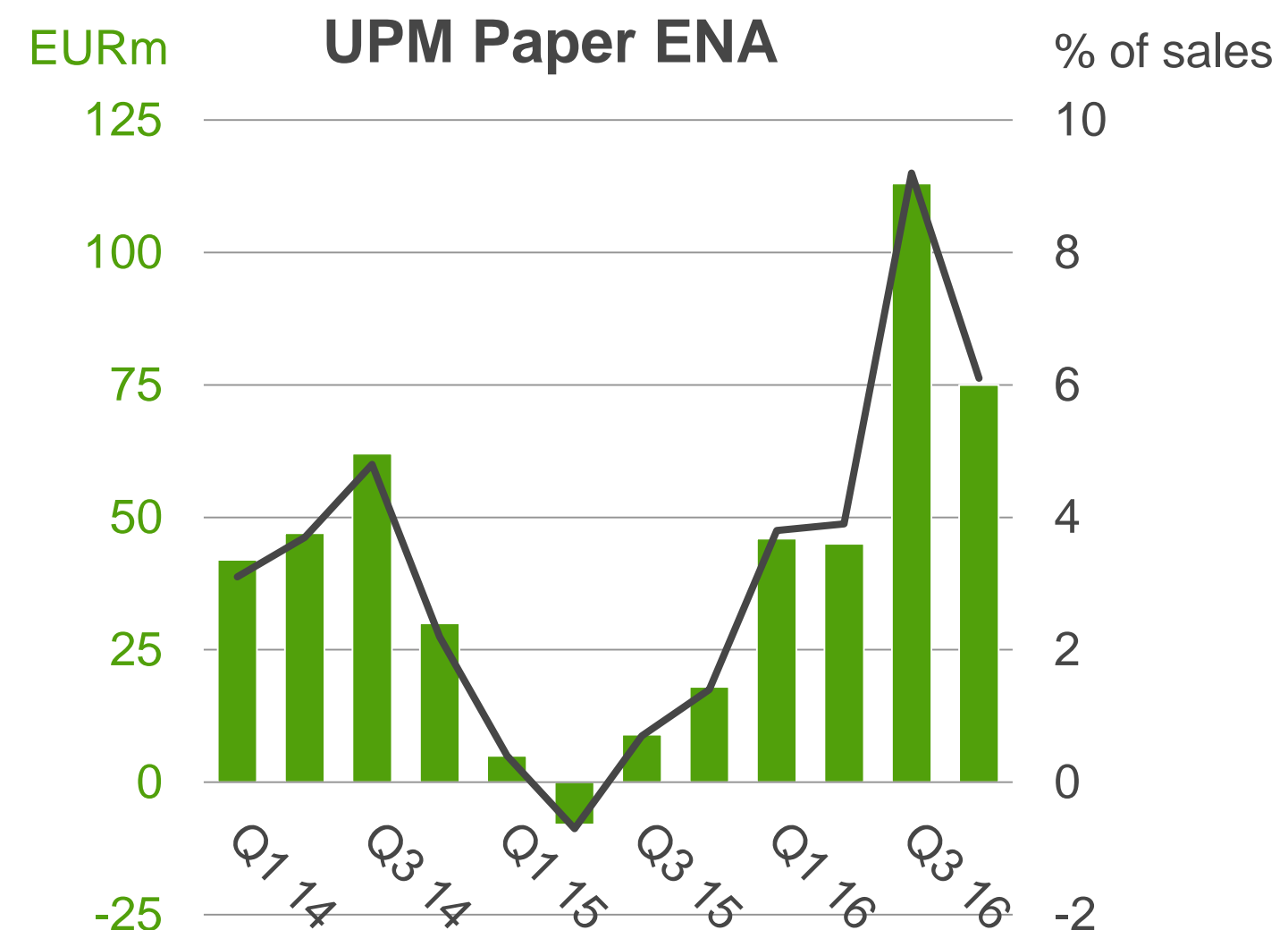
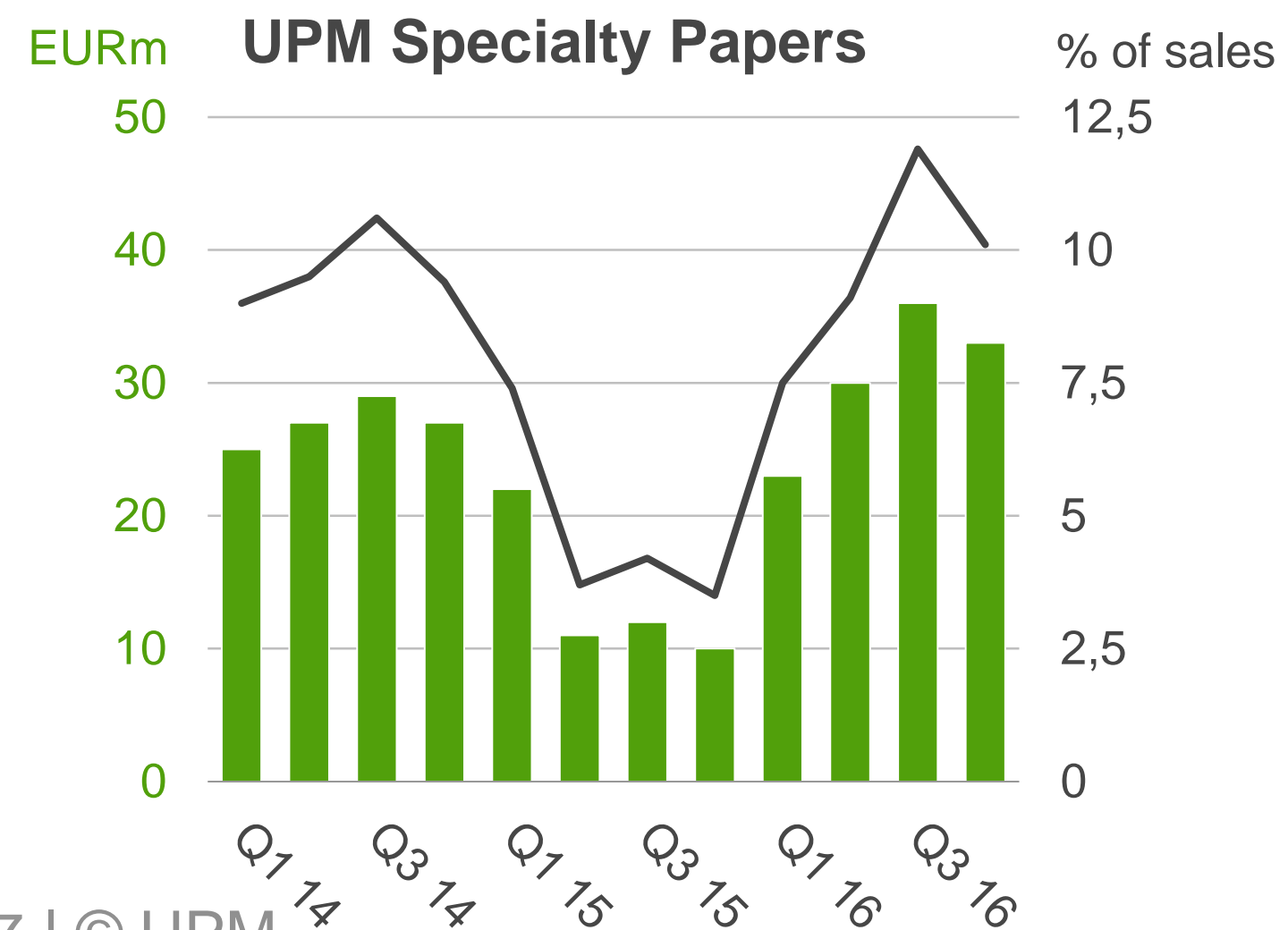
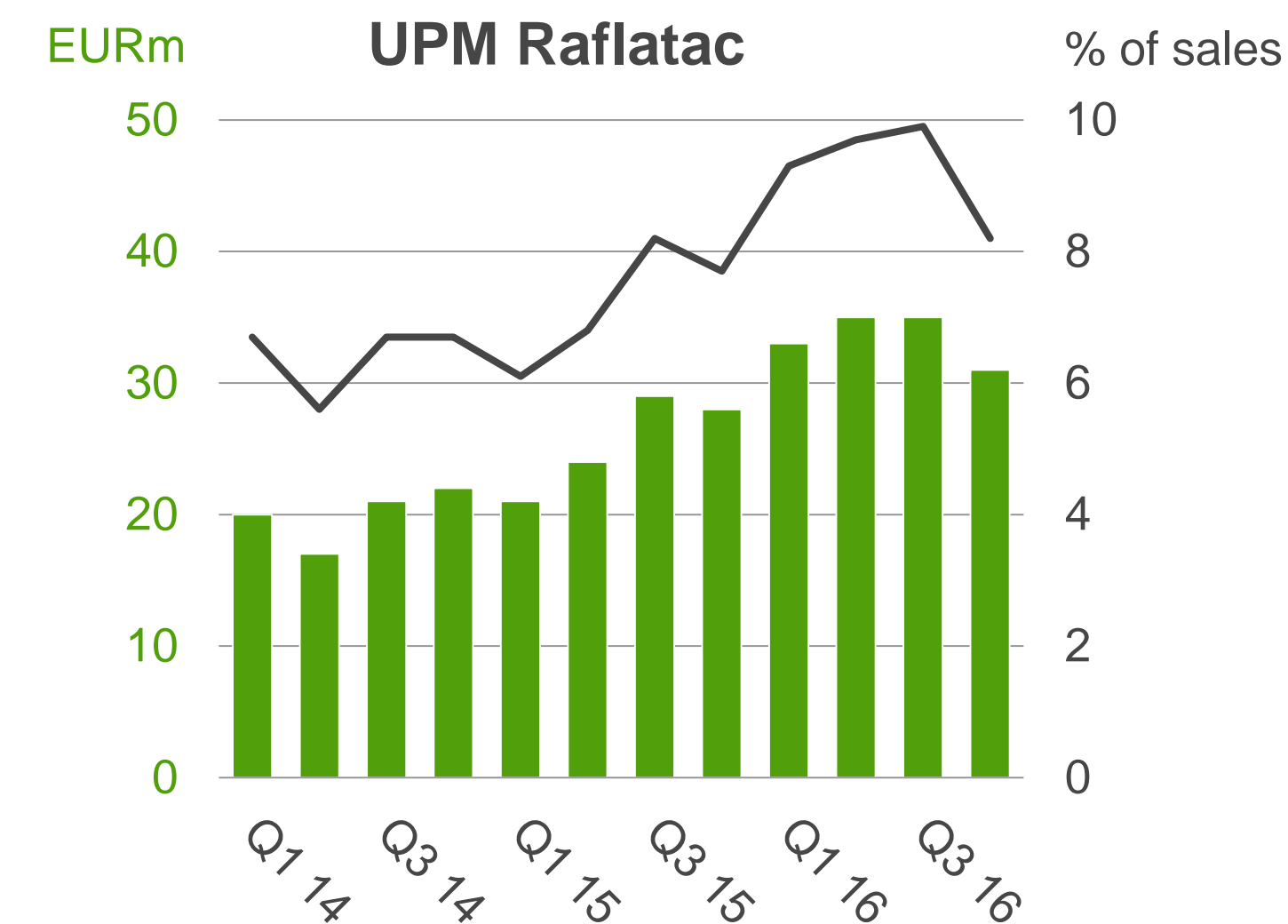
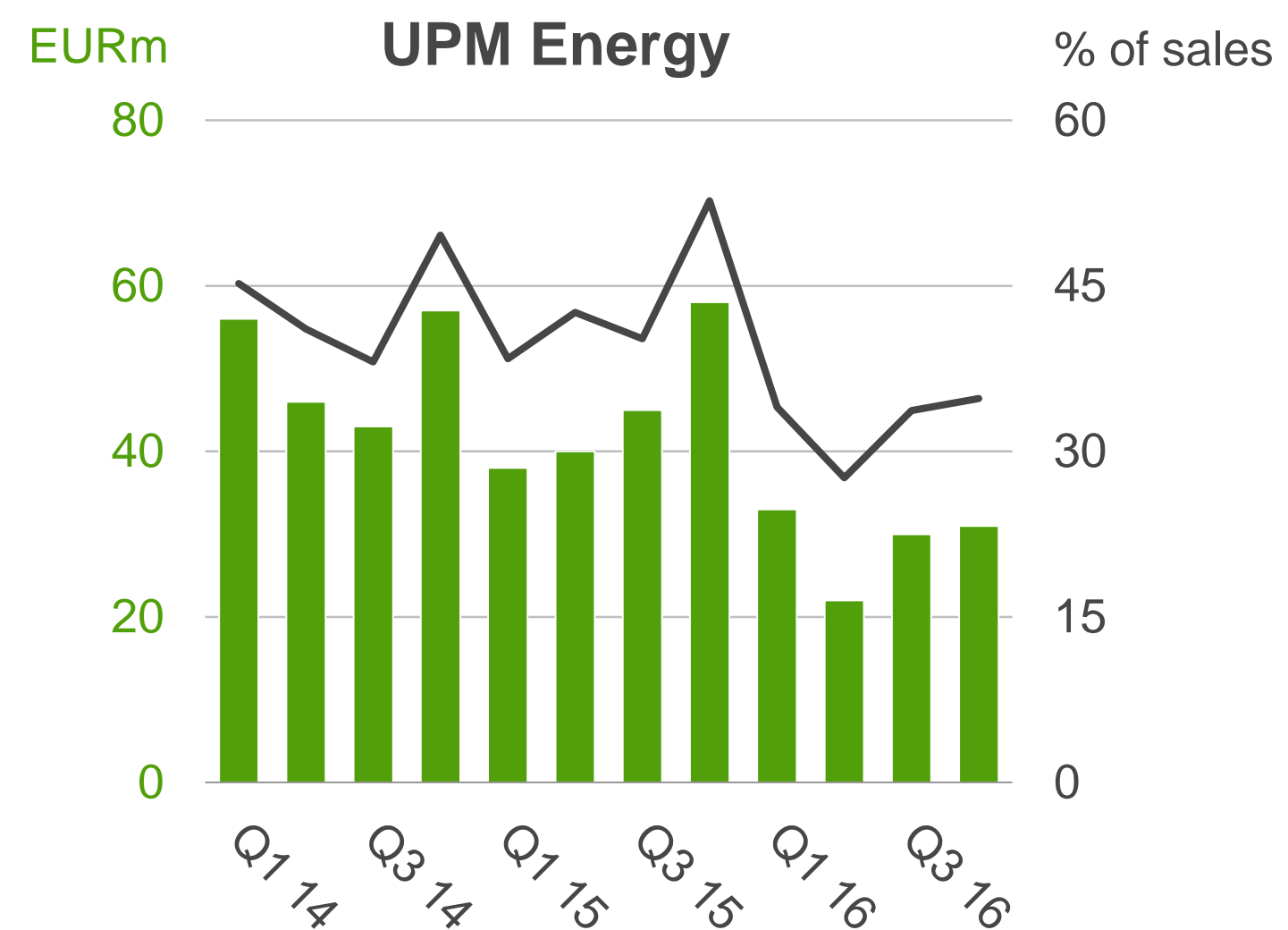
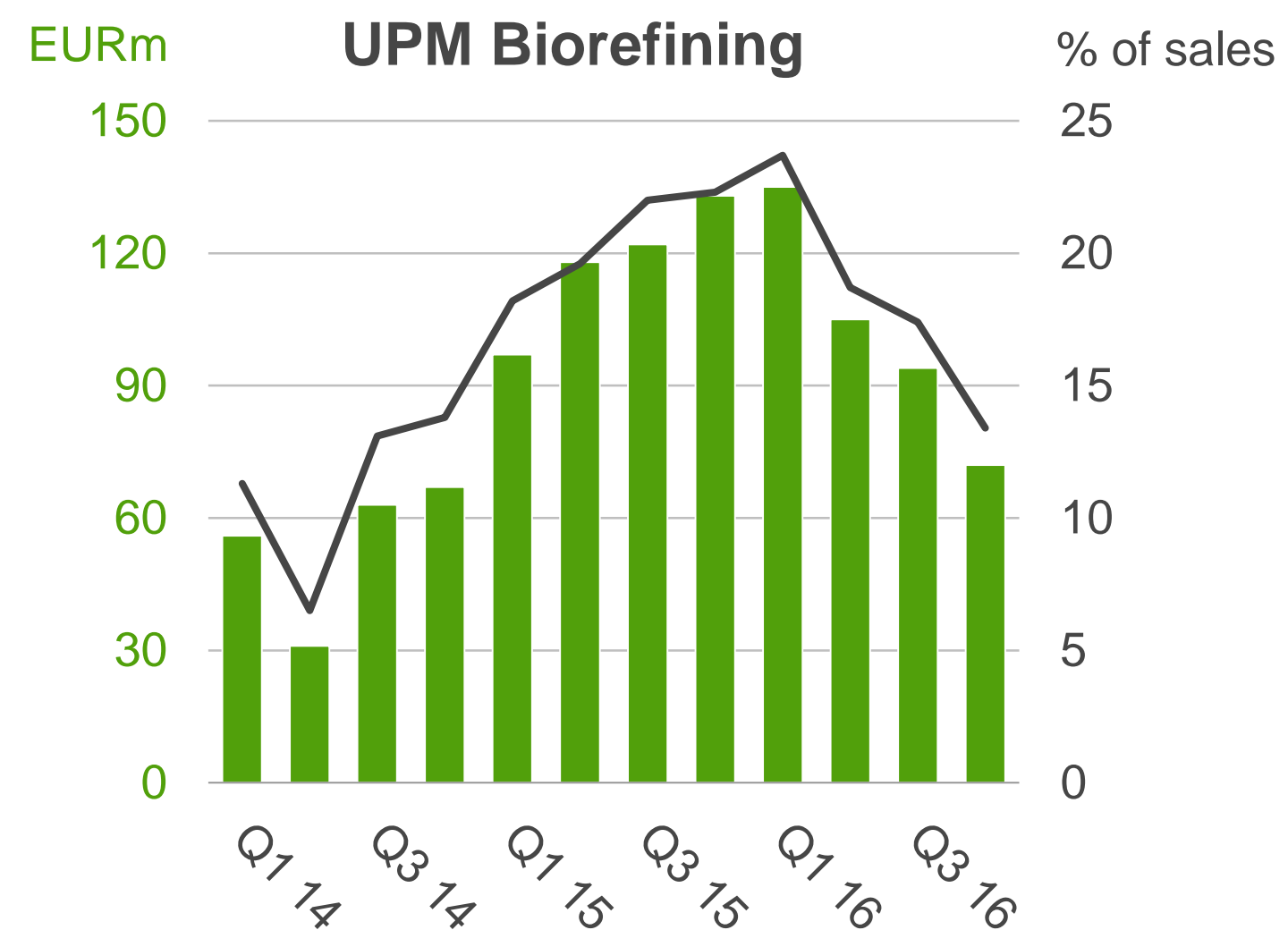
Low replacement investments

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

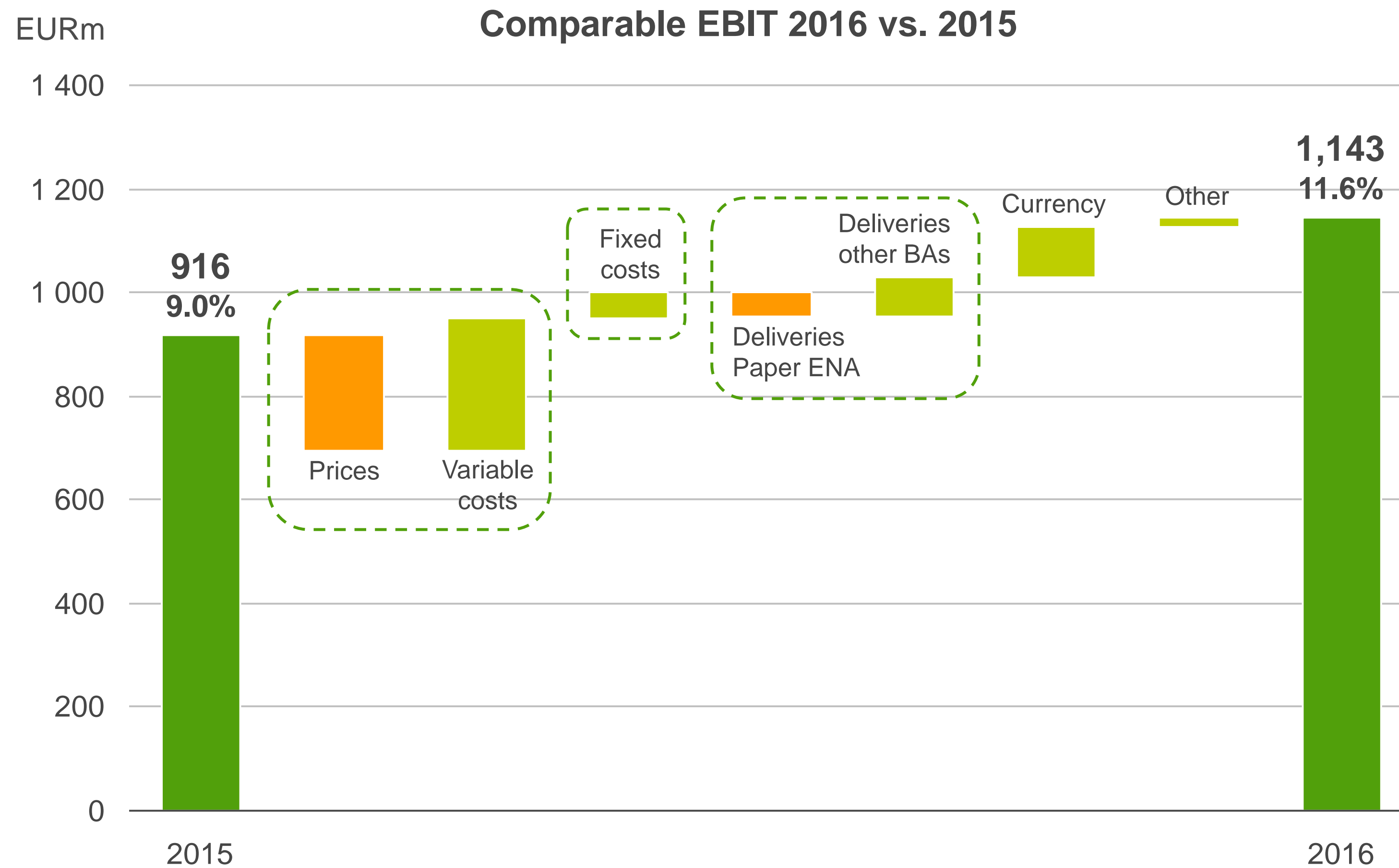
▶ Modest total capex, attractive returns and continuously strengthening balance sheet



Comparable EBIT by business area



Growth projects contributed significantly and cost efficiency measures continued on a strong track



Outlook for 2017

- UPM's profitability improved significantly in 2016 and is expected to remain 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.
- 2017 starts with lower pulp prices and lower availability of hydropower than in the beginning of 2016.

Responsibility is good business

MORE WITH BIOFORE



Creating value through
products and innovation



Creating competitive advantage
and long-term value by efficiency

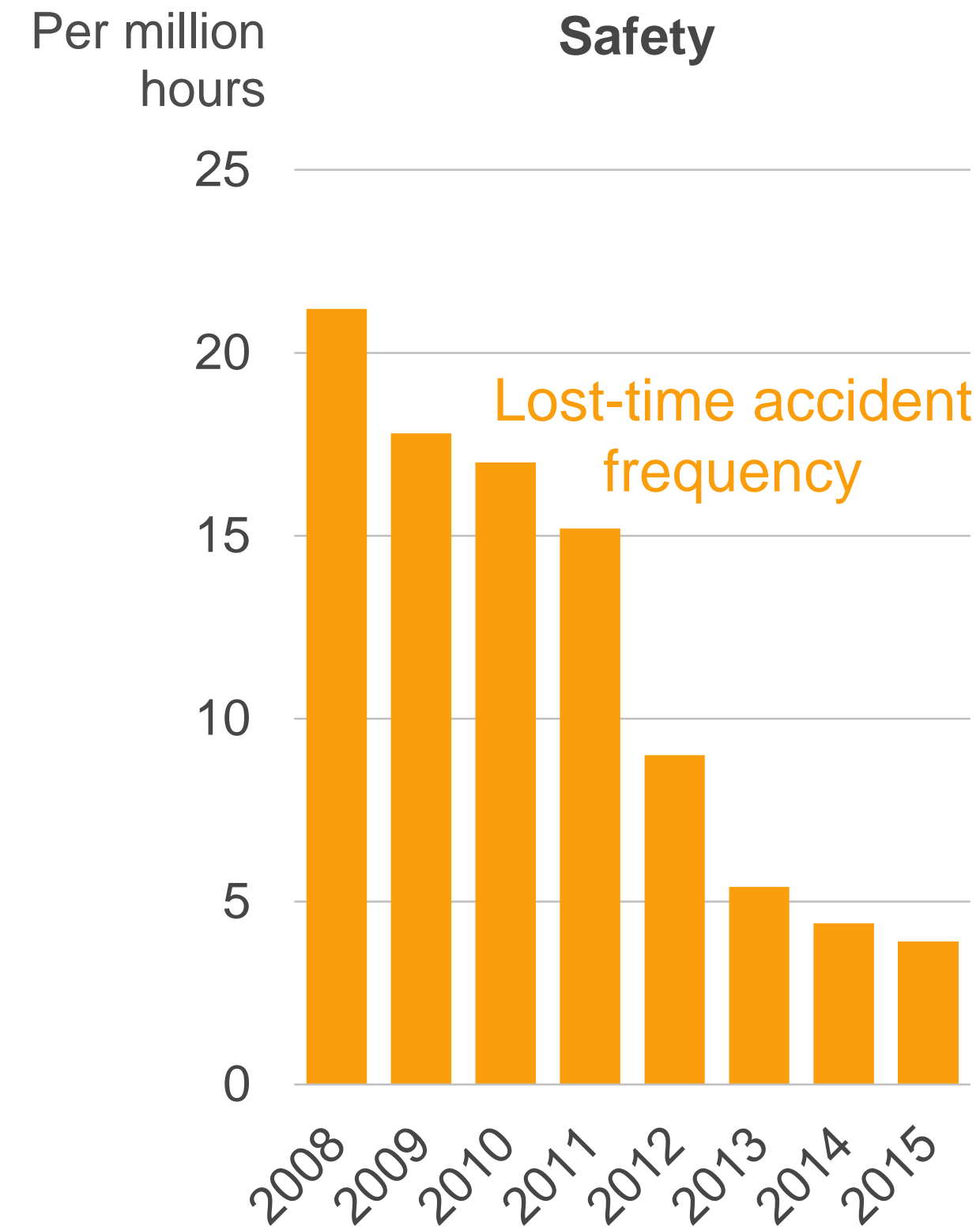


Risk mitigation by responsible
value chain and production

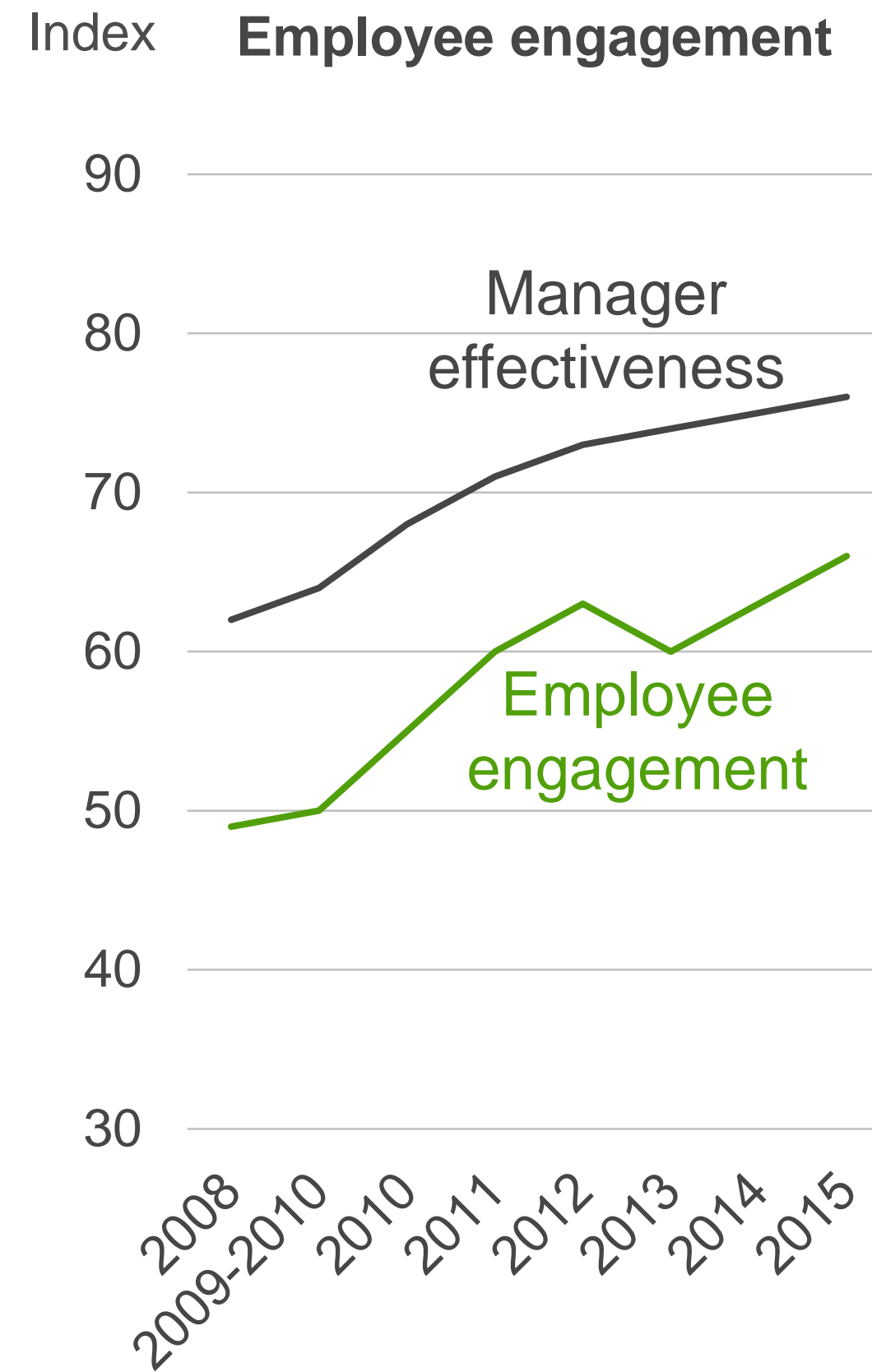
"We believe that
customers, investors
and other stakeholders
value responsible
operations that keep
risks under control and
add to our business
opportunities,
thereby increasing
the company value."

UPM Annual Report 2015

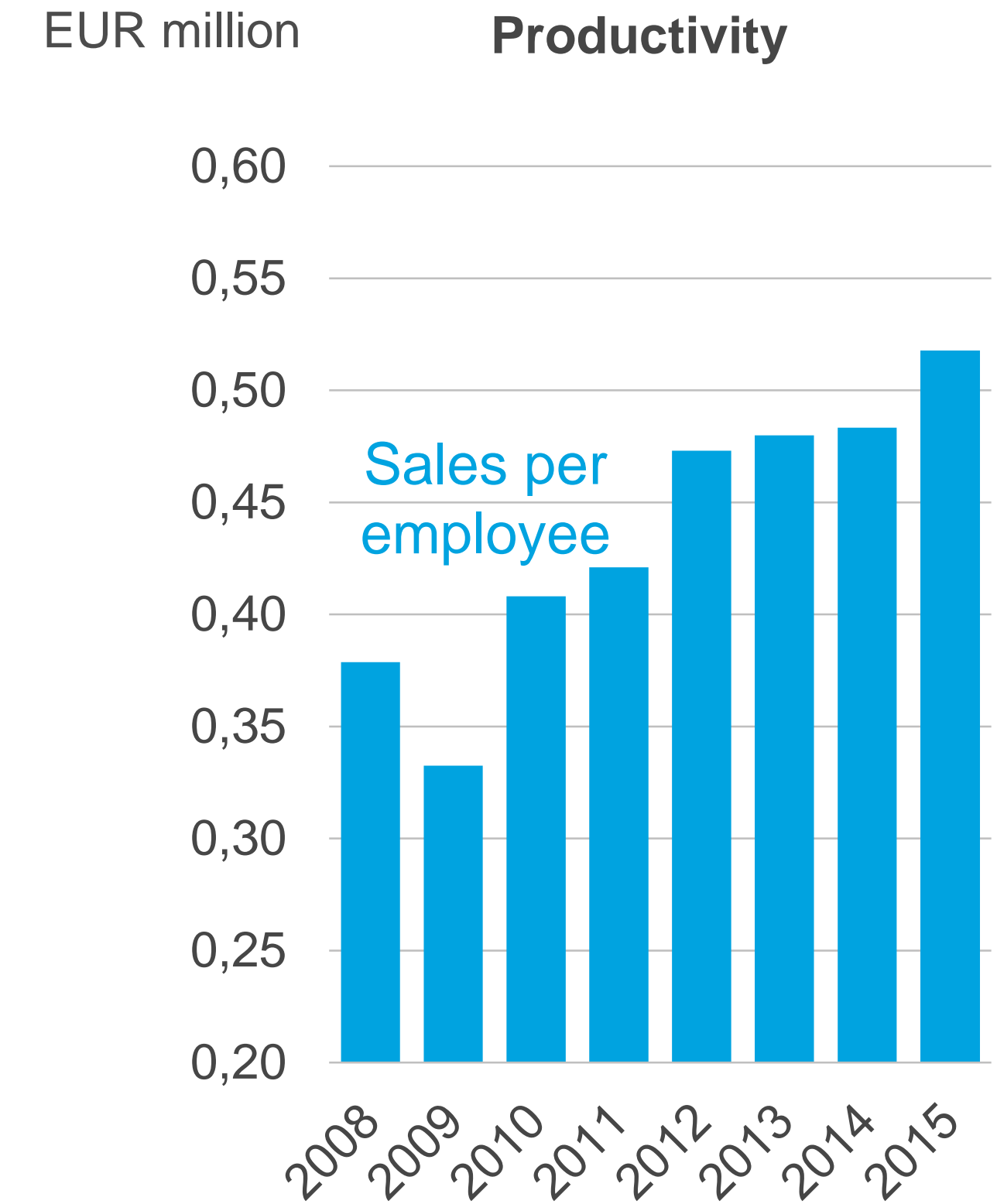
Creating competitive advantage and long-term value by engagement



5-year change:
-77%



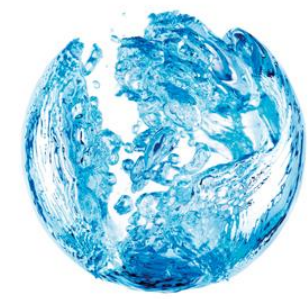
5-year change:
+11



5-year CAGR:
+5%

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



SO₂ emission
-90%
Per tonne of paper

water intake



water discharge



Consistent long-term work receives external recognition

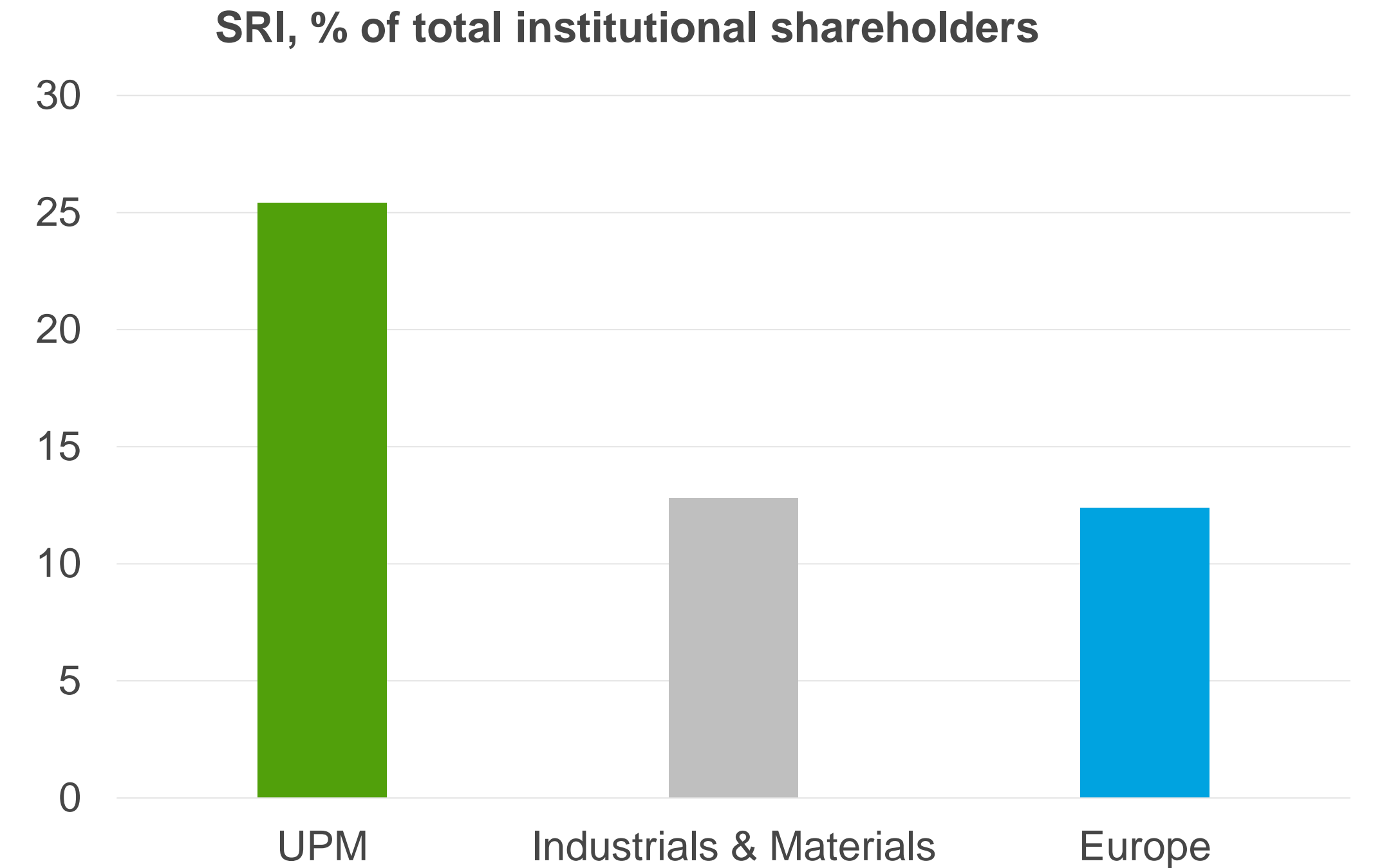
UPM in sustainability indices



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, October 2015

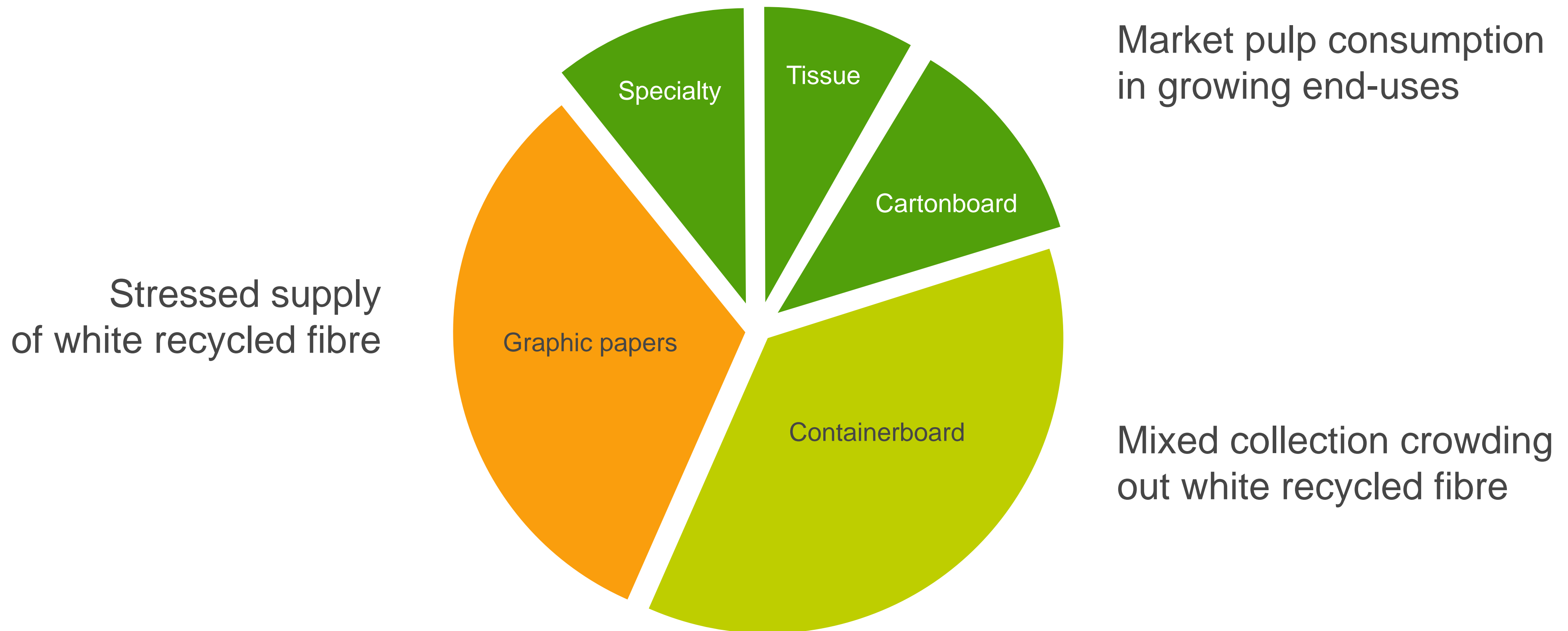
UPM Biorefining

Pulp is used in products we all use daily

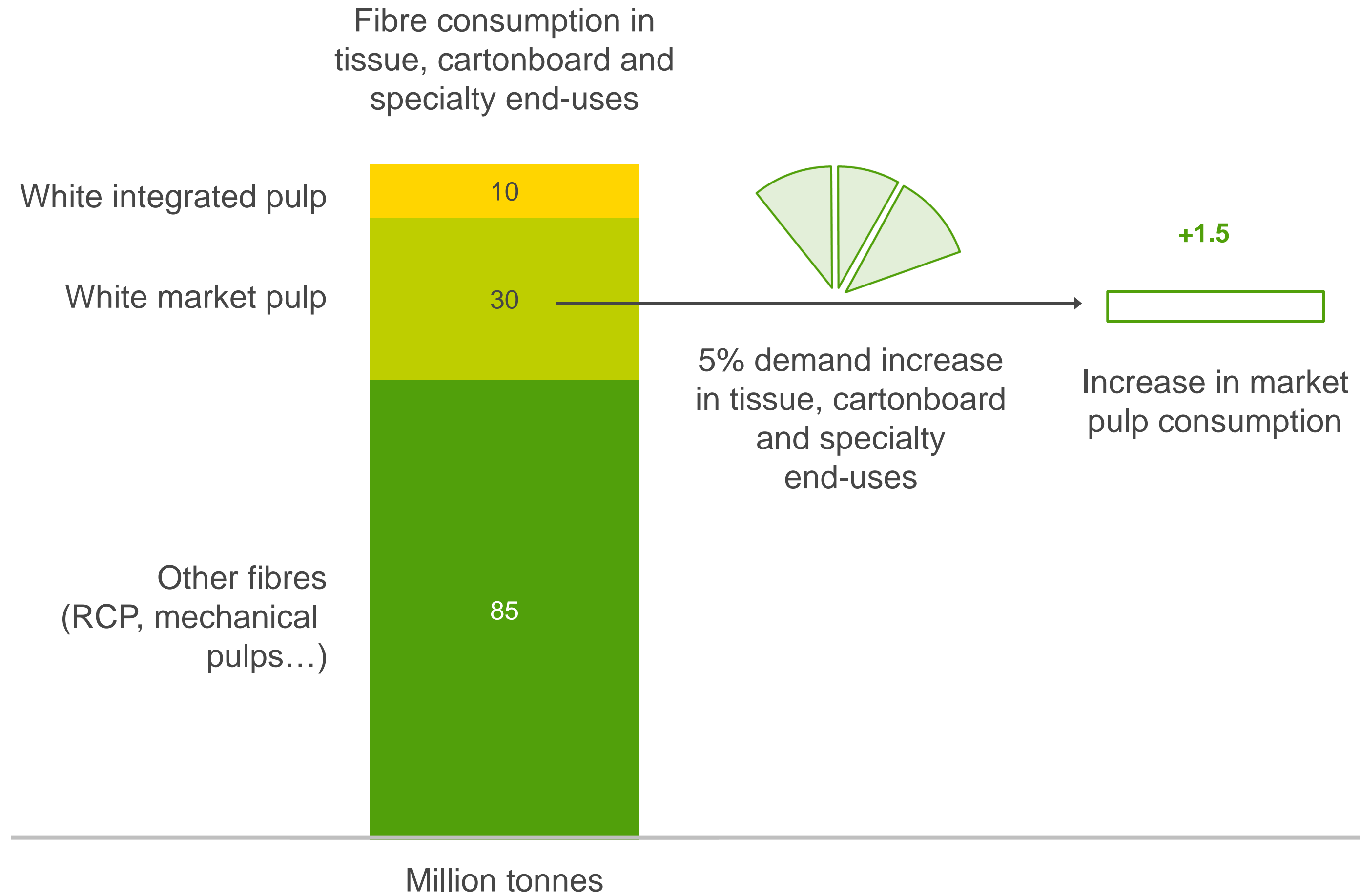


Market pulp consumed in growing end-uses – supply of alternative white fibres declines

Global paper and board production

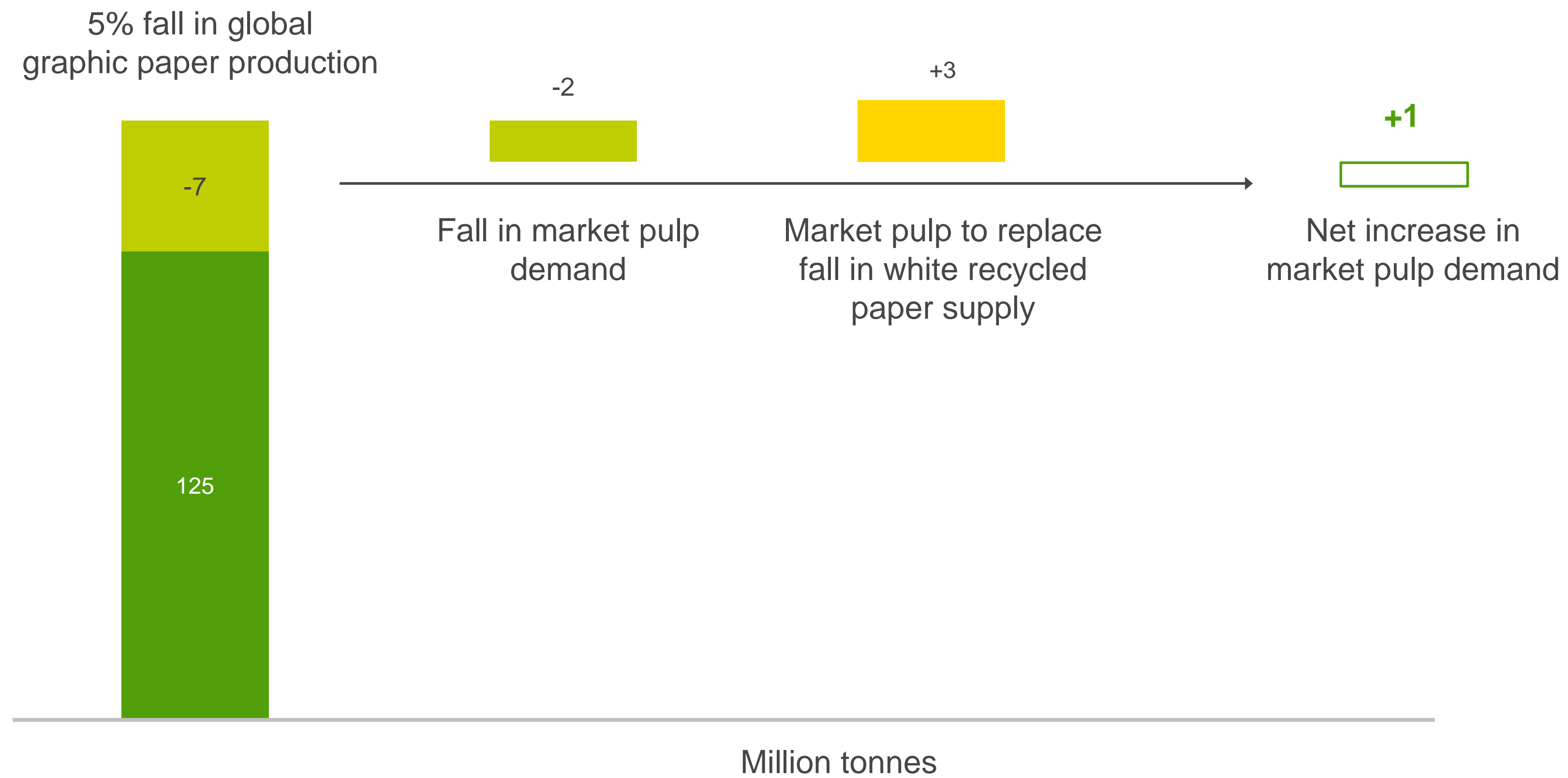


Case: Market pulp consumption in growing end-uses



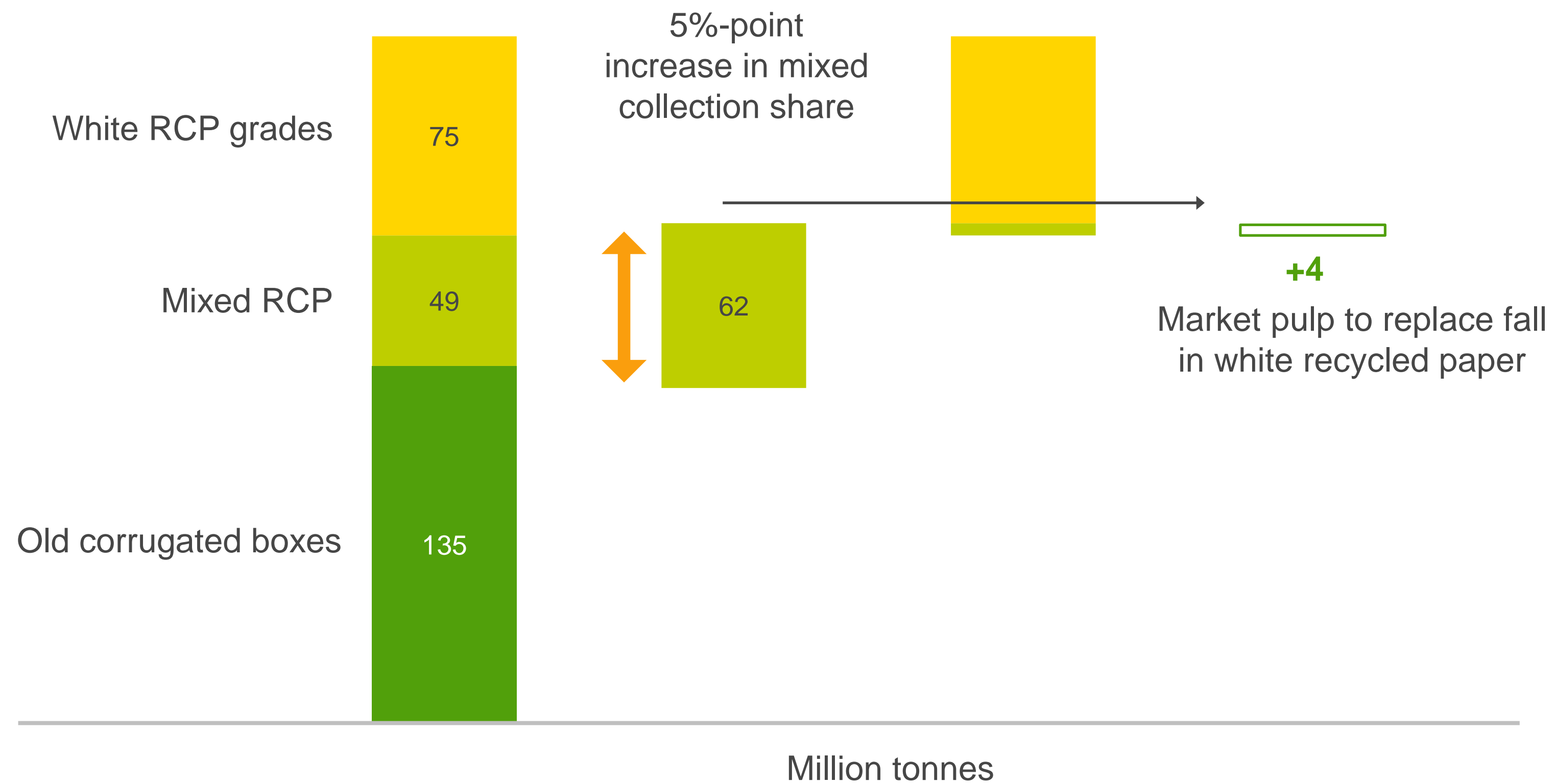
Source: Pöyry, Hawkins Wright, UPM

Case: Stressed supply of white recycled paper



Source: Pöyry, UPM

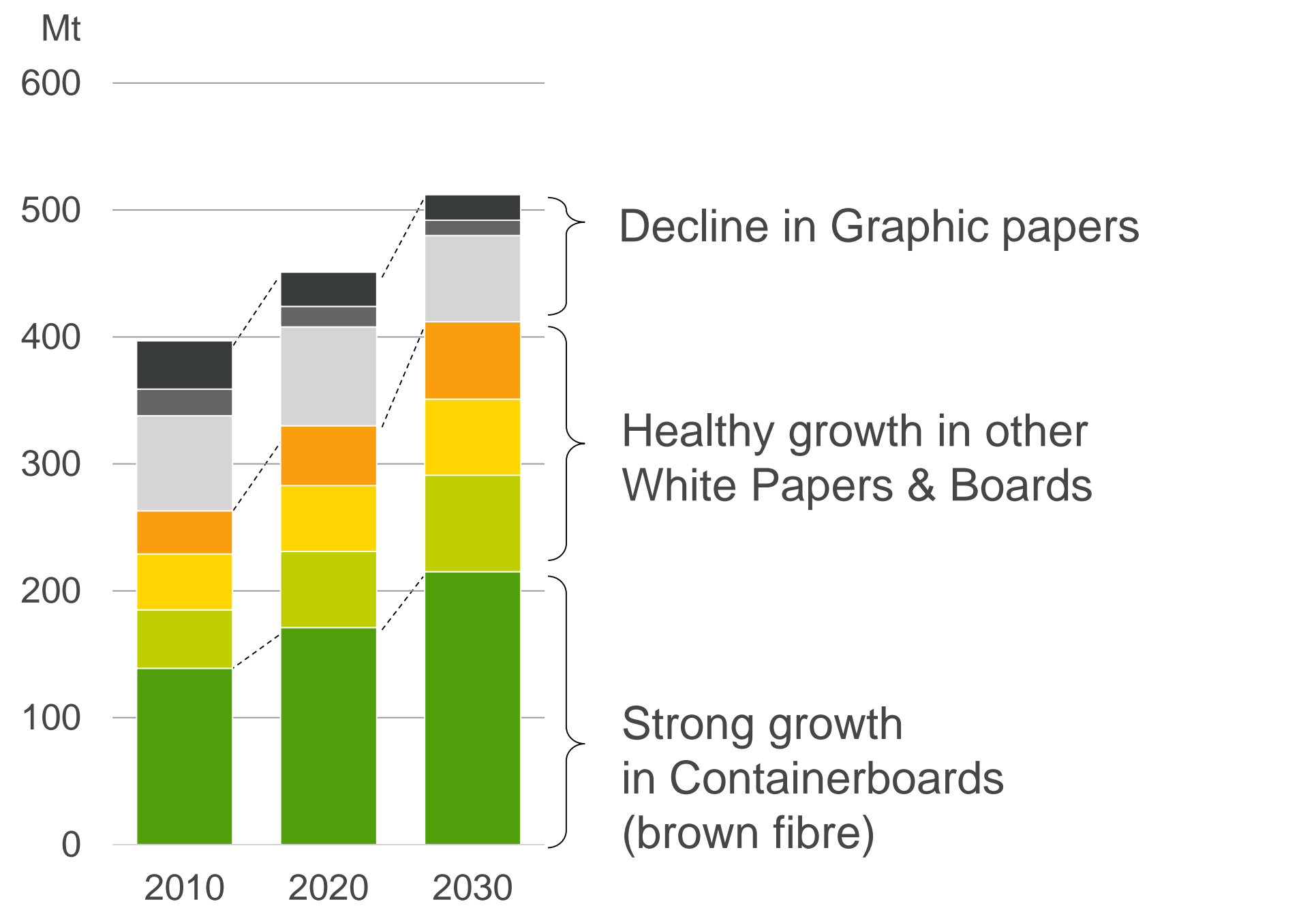
Case: Mixed collection crowding out white recycled fibre



Source: Pöyry, UPM

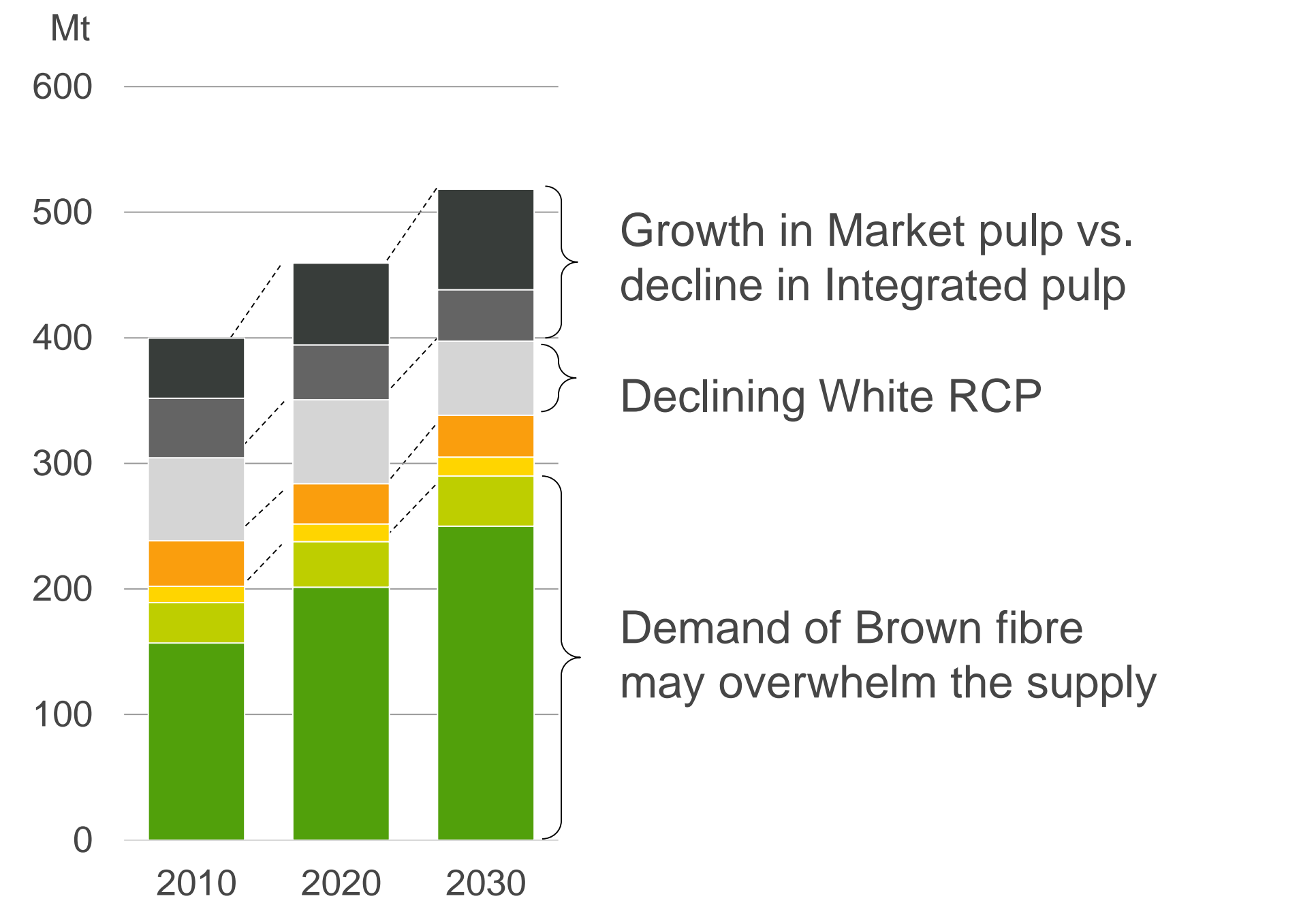
Summary of pulp demand outlook

Increase in end use ...



- Newsprint
- WC
- WF
- Spec. & other
- Container-boards
- Tissue & fluff
- Carton-boards
- WF: Wood-free graphical papers
- WC: Wood-containing graphical papers (magazine grades)

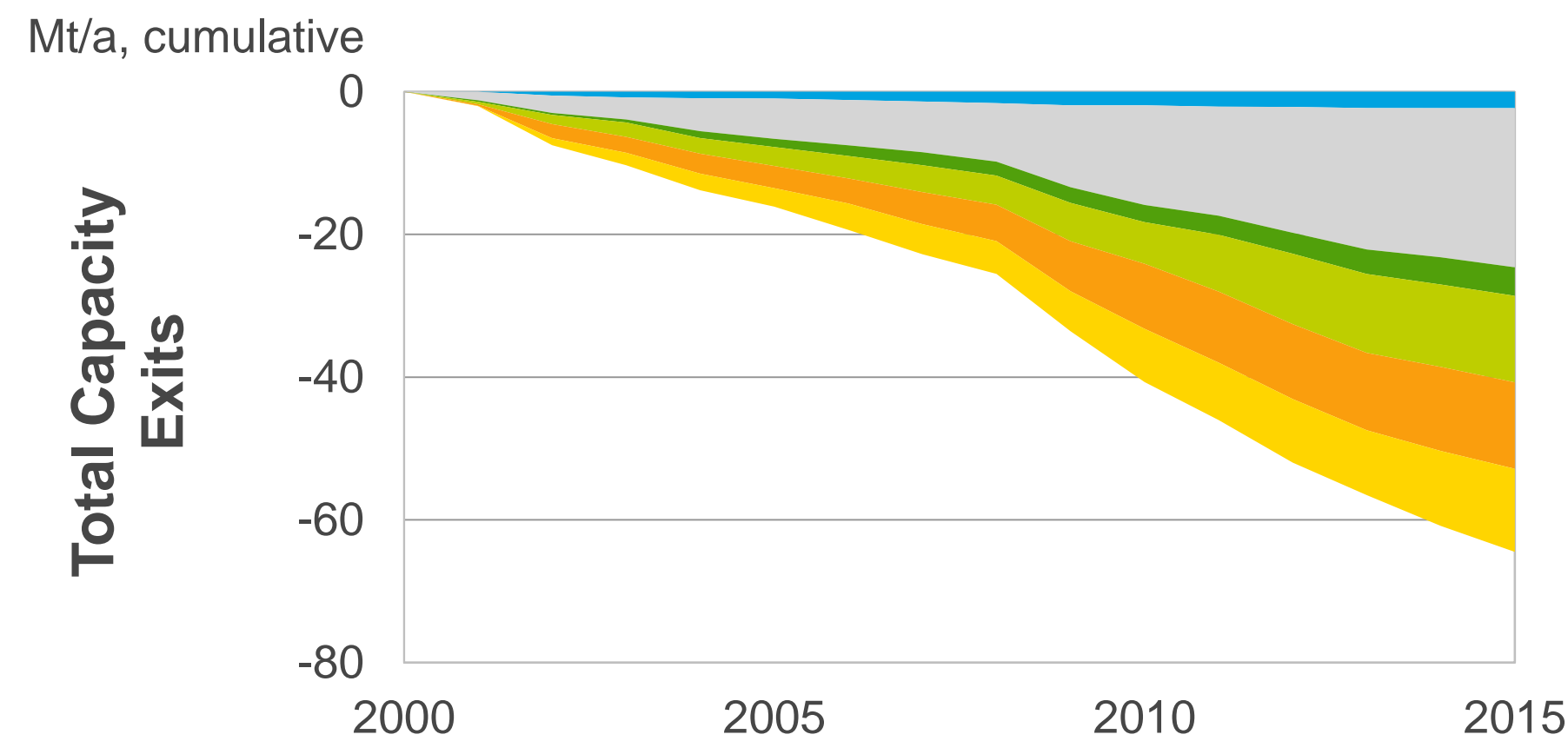
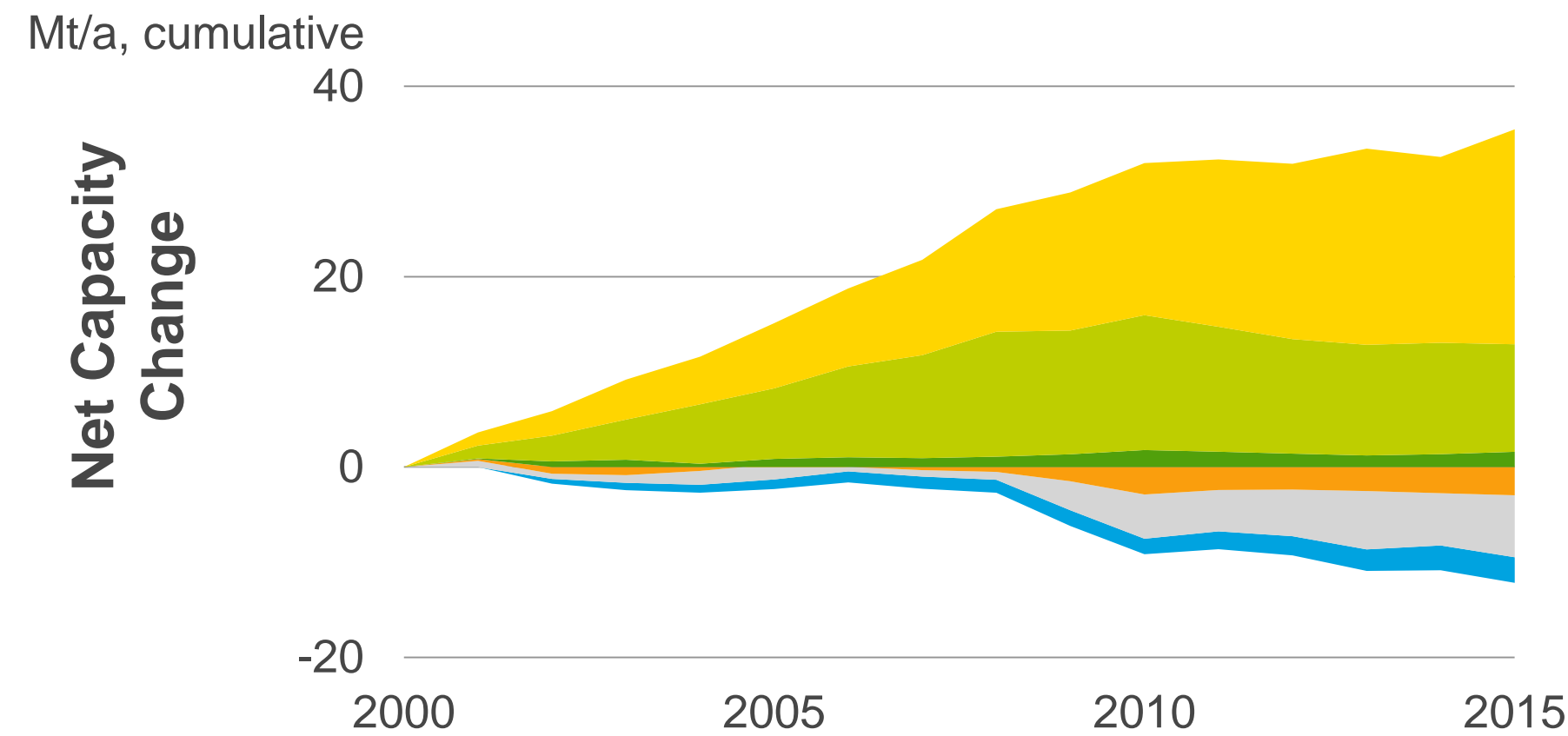
... will drive fibre demand in coming decades



- RCP Brown
- Non-wood
- RCP White
- Market pulp
- Unbleached pulp
- Mechanical pulp
- Integrated pulp
- Estimated growth of White RCP + Integrated Pulp + Market Pulp is still conservative (~1 Mt/a)

Source: UPM, Pöyry, RISI

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



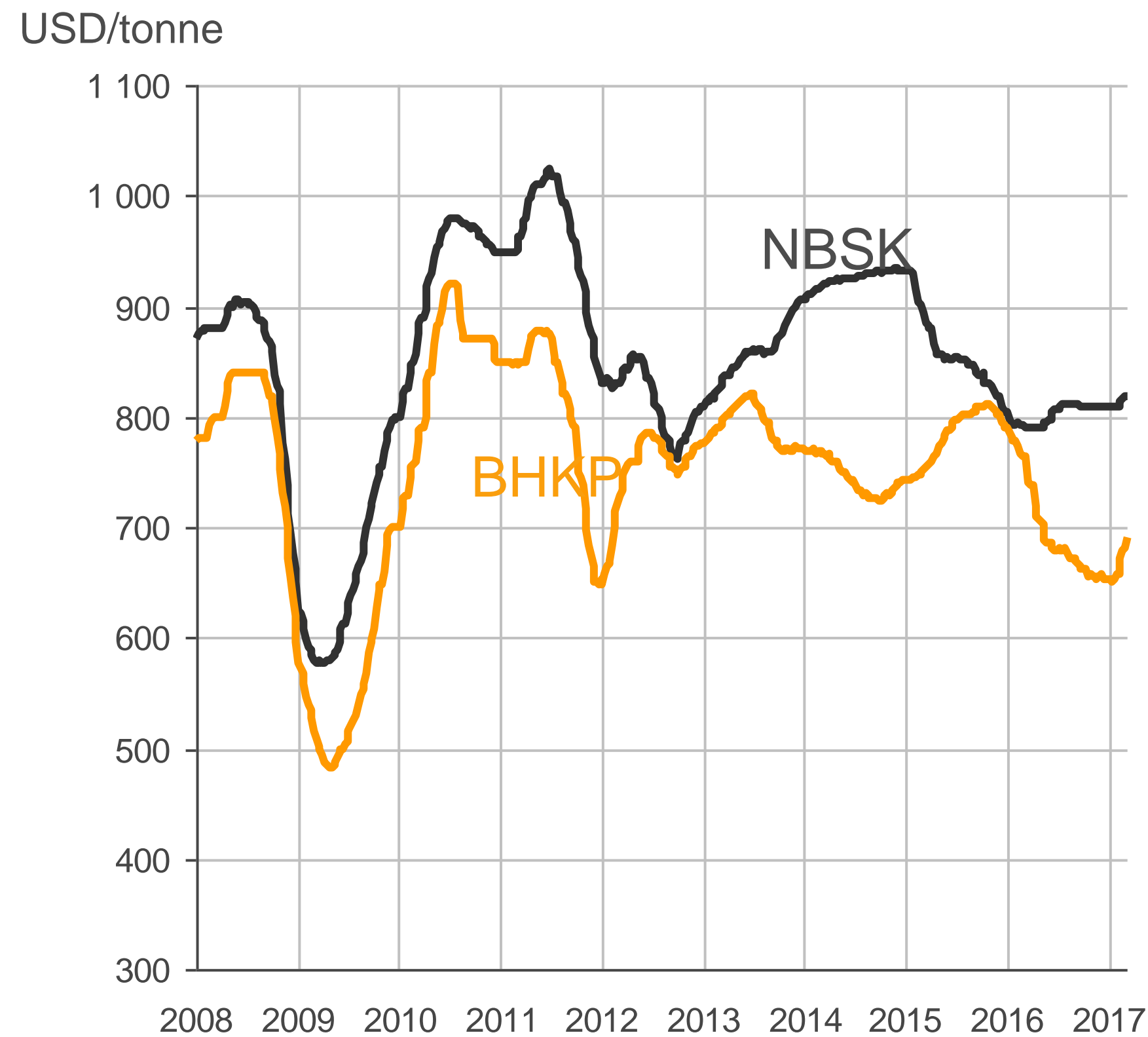
- **Hardwood pulp** capacity has experienced strong net growth after 2000 and is expected to continue growing.
- **Softwood** has faced closures as much as hardwood. New demand in China is turning decline into a slow growth.
- **White RCP** was the fastest-growing fibre in Europe and NA in early 1990's. 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.

Note: Including both market and integrated pulp

Source: Pöyry

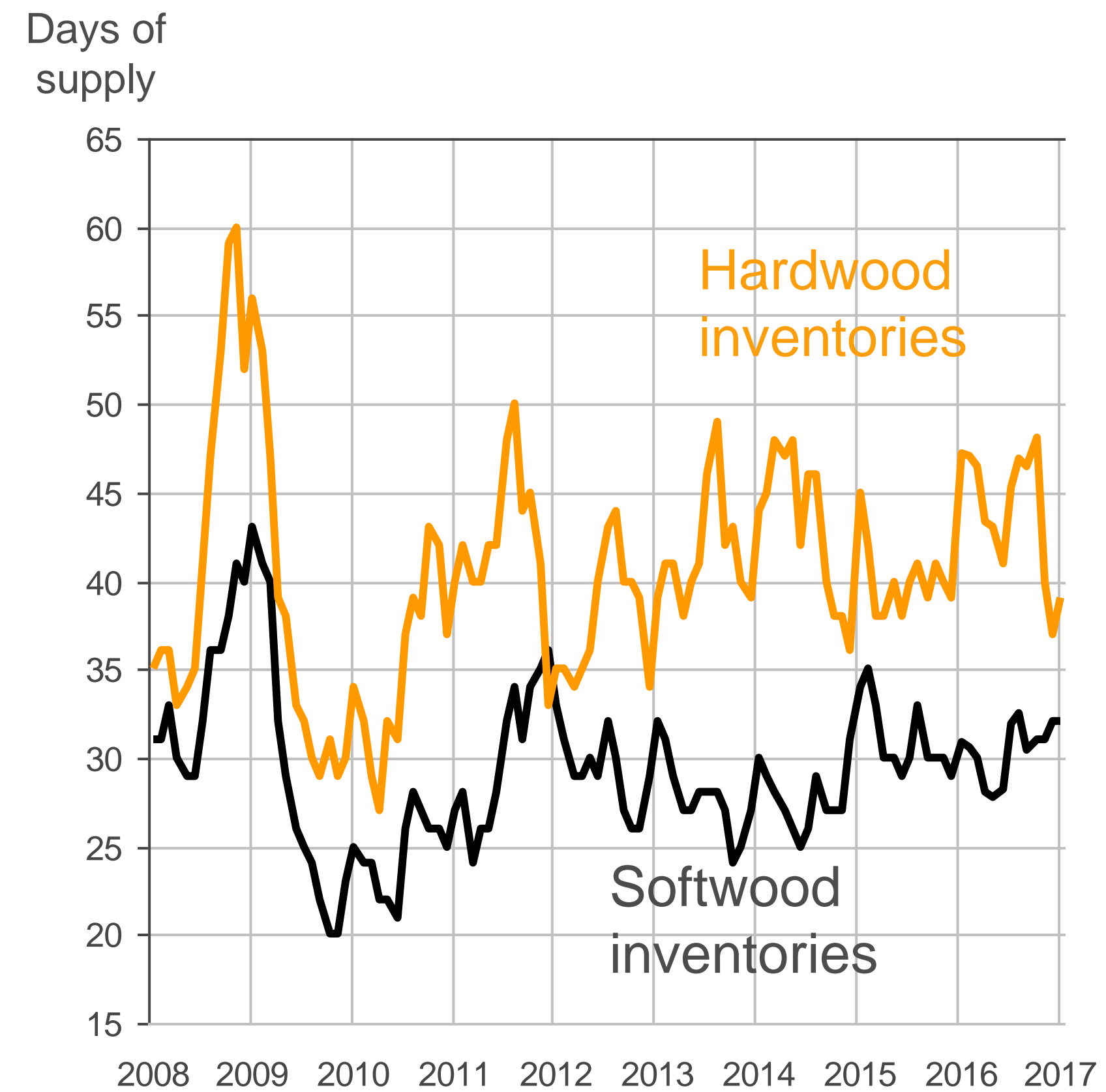
Chemical pulp market

Q4 NBSK pulp price remained stable from Q3
 Q4 BHKP pulp price decreased 2% from Q3



Source: FOEX Indexes Ltd.

Pulp inventories



Source: PPPC World-20 statistics

UPM Biorefining

Large modern assets allow growth through debottlenecking with high pay-off at low risk

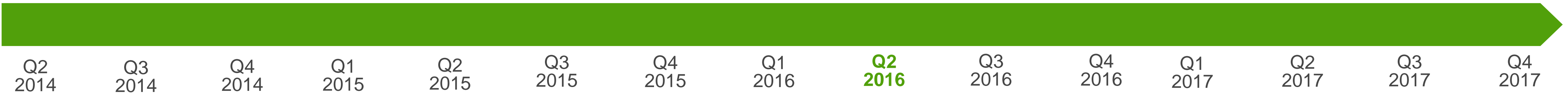
Pietarsaari
pulp mill expansion
70,000t



Kymi
pulp mill expansion
170,000t



Kaukas
pulp mill efficiency improvement, paper and
pulp decoupling completed



Fray Bentos
pulp mill expansion
100,000t



Capacity increase since 2013 more than
500,000 tonnes
with investments of ~ EUR 350m

Kymi
pulp mill expansion
170,000t



Uruguay could be a competitive alternative – time schedule is several years



 Fuel retail



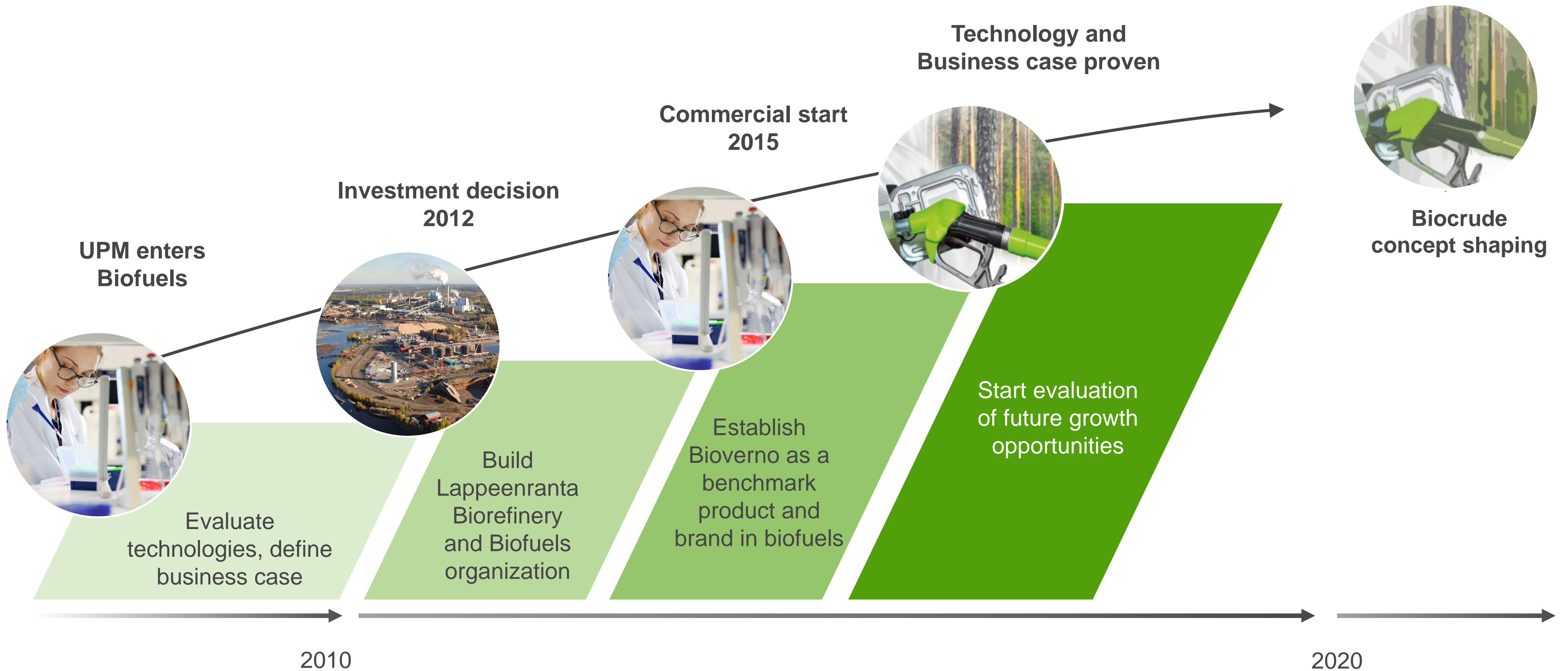
 Dedicated green fleets



  Marine/Aviation

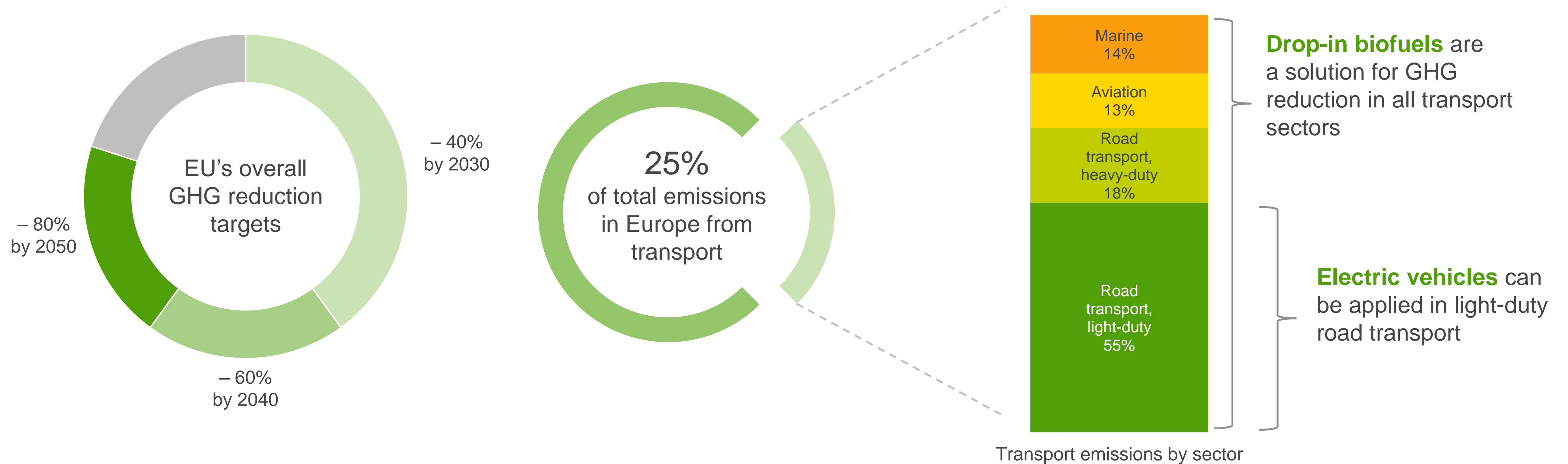


UPM Biofuels business evolving



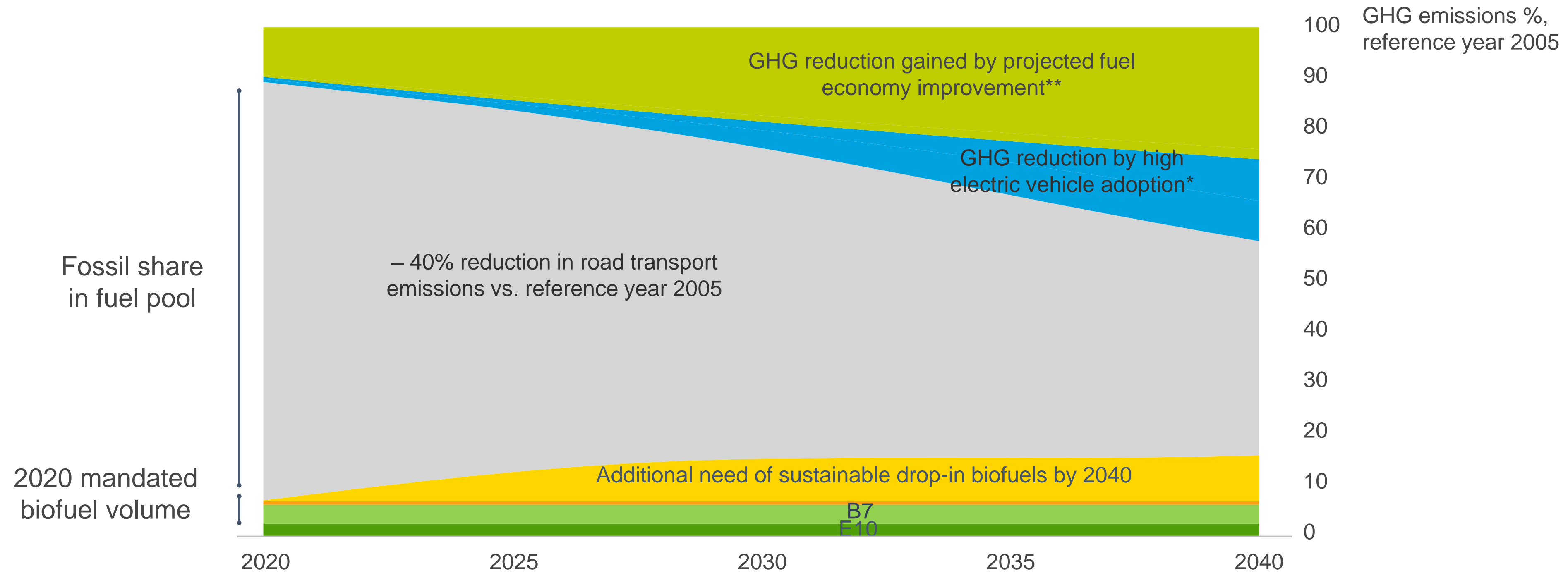
Significant emission cuts needed in transportation sector

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

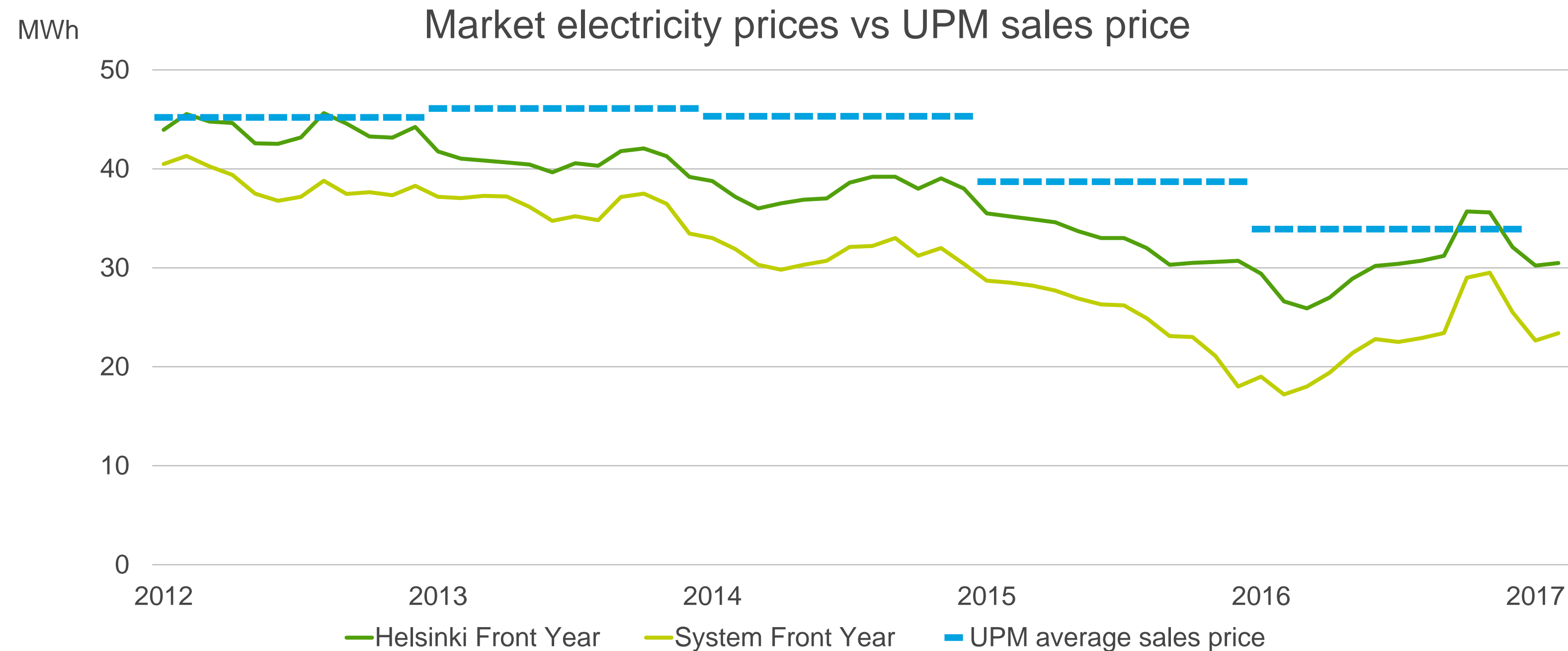
Condensing power



Flexible hydro production with optimisation opportunities

Nuclear as reliable base load with world-class availability performance

Cost efficient generation enables robust profitability also in challenging market environment



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

UPM Raflatac

Self-adhesive labels in end-use



Leading position in a growing market

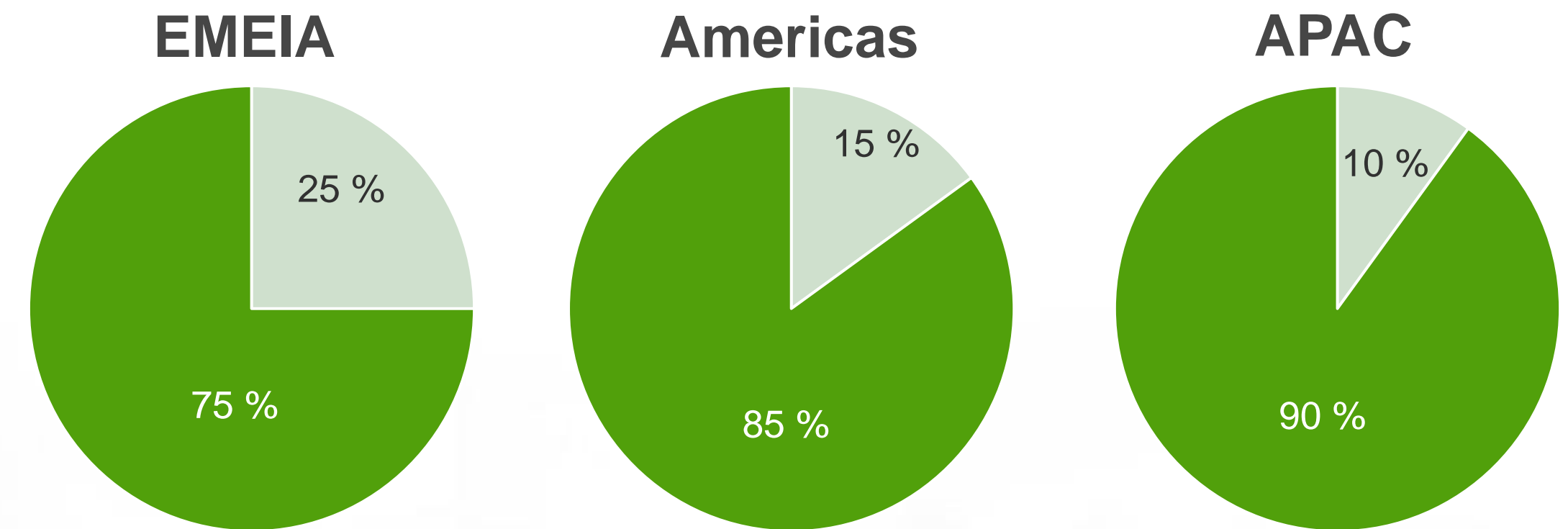
The self adhesive labelstock market

- > 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

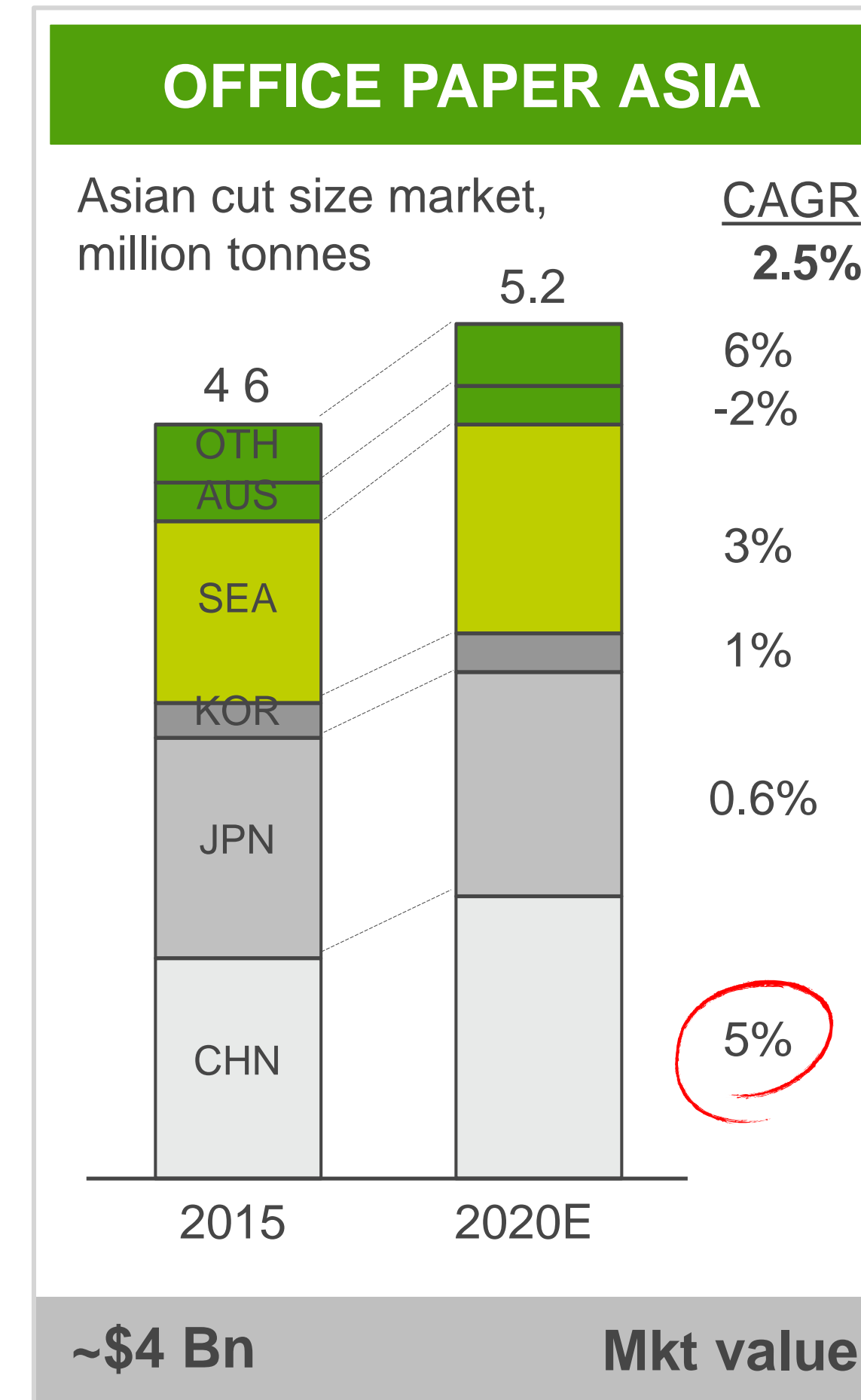
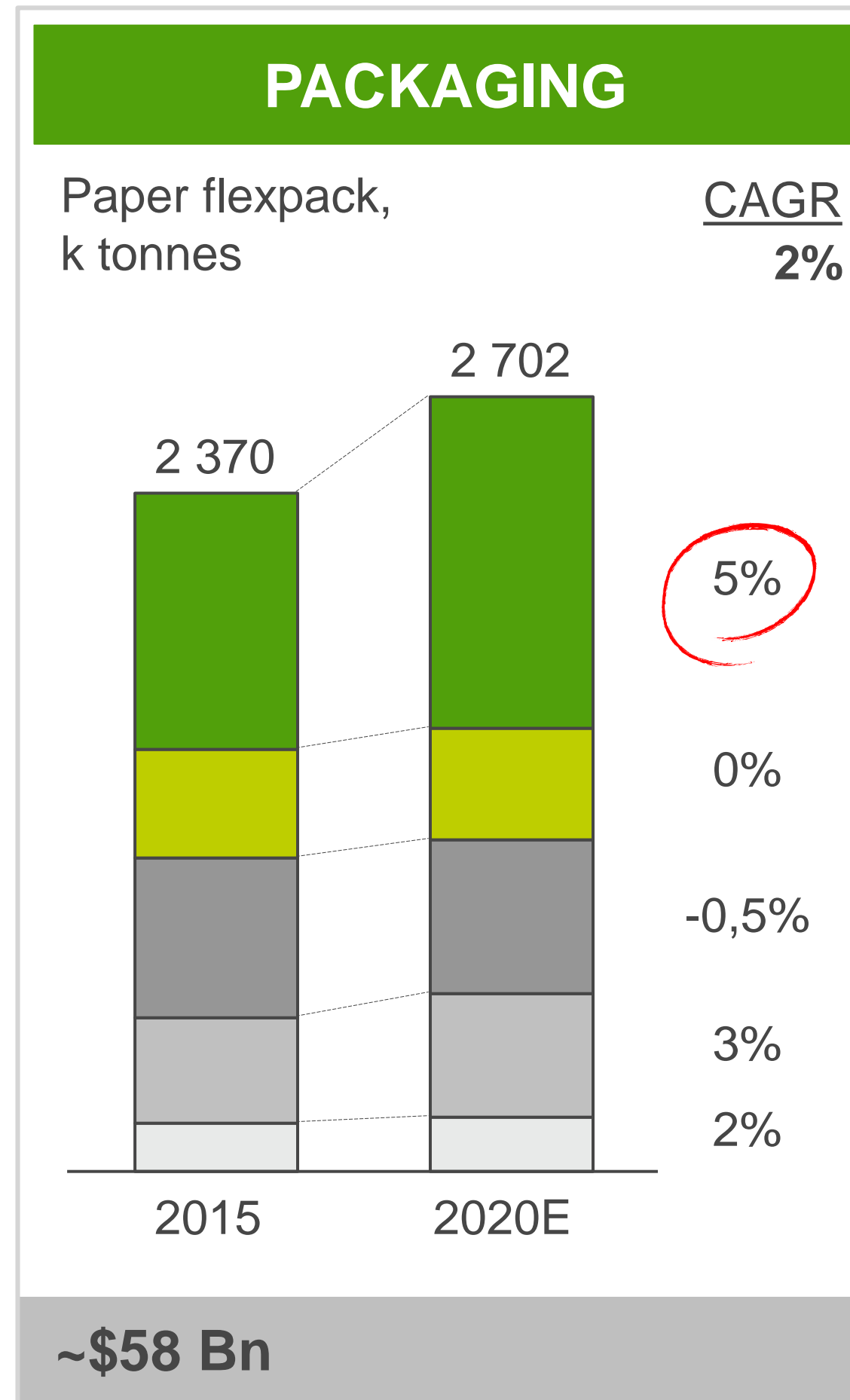
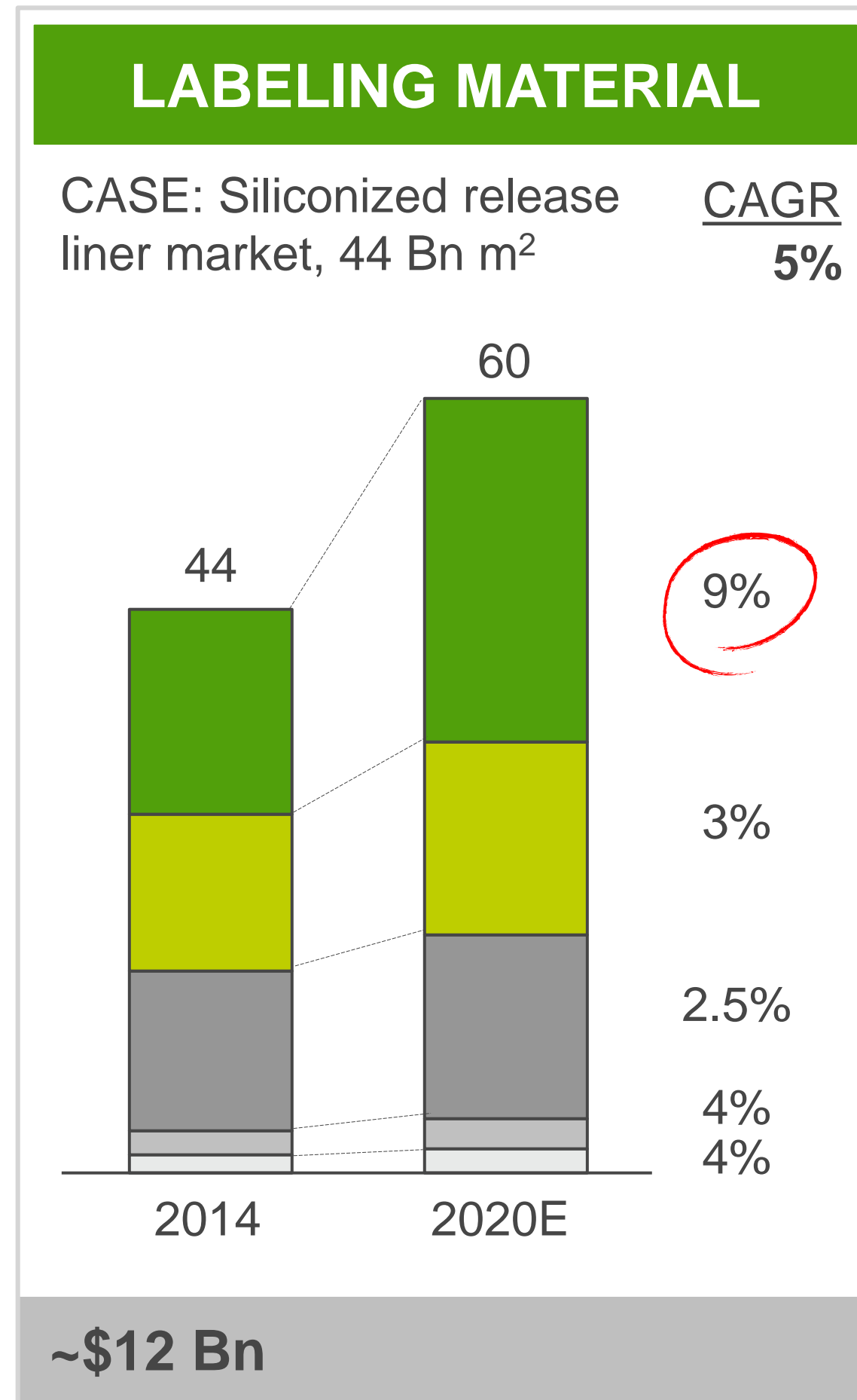


UPM Specialty Papers

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

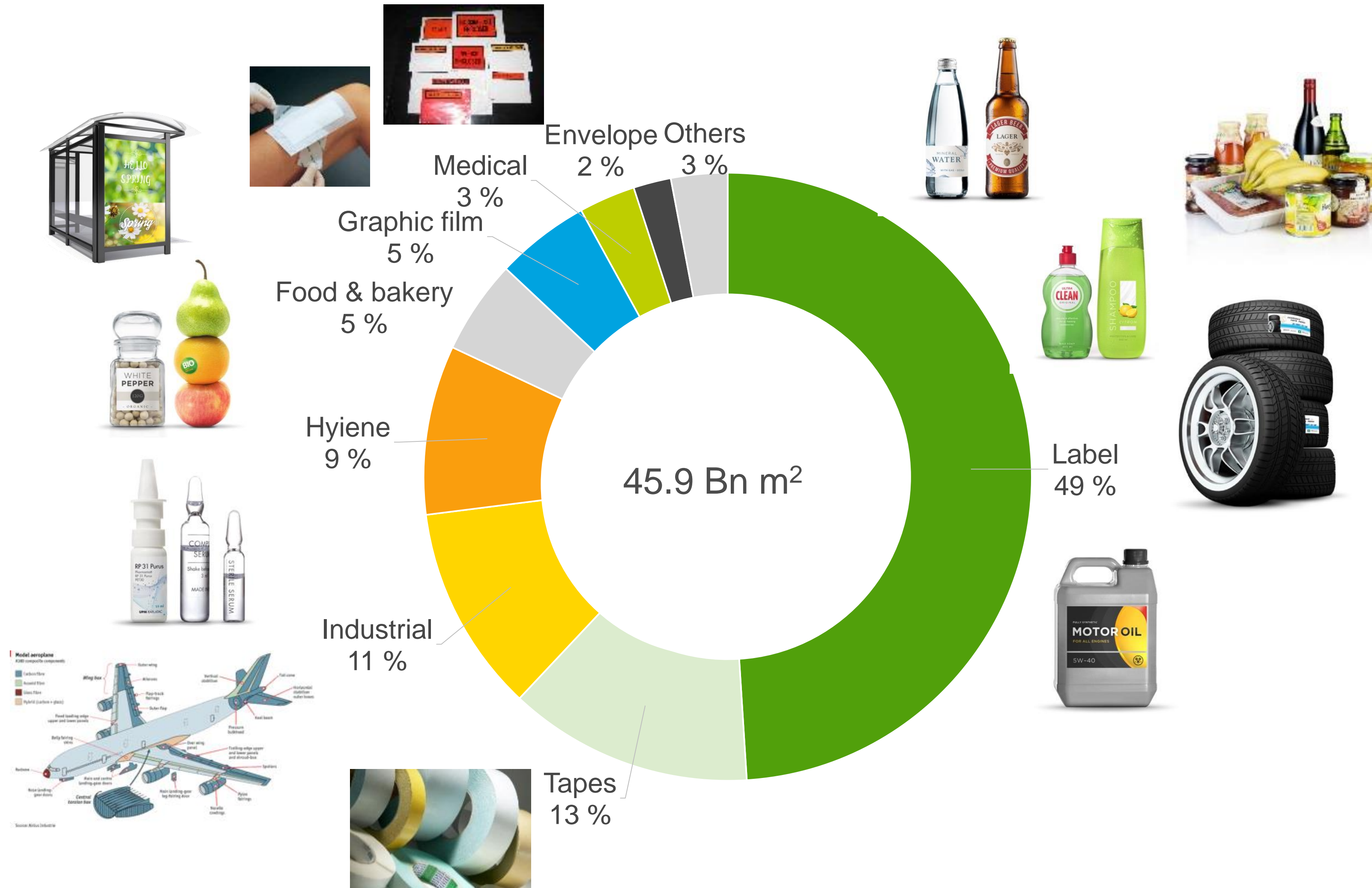


Our end use markets are growing



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

Global release liner market: Applications



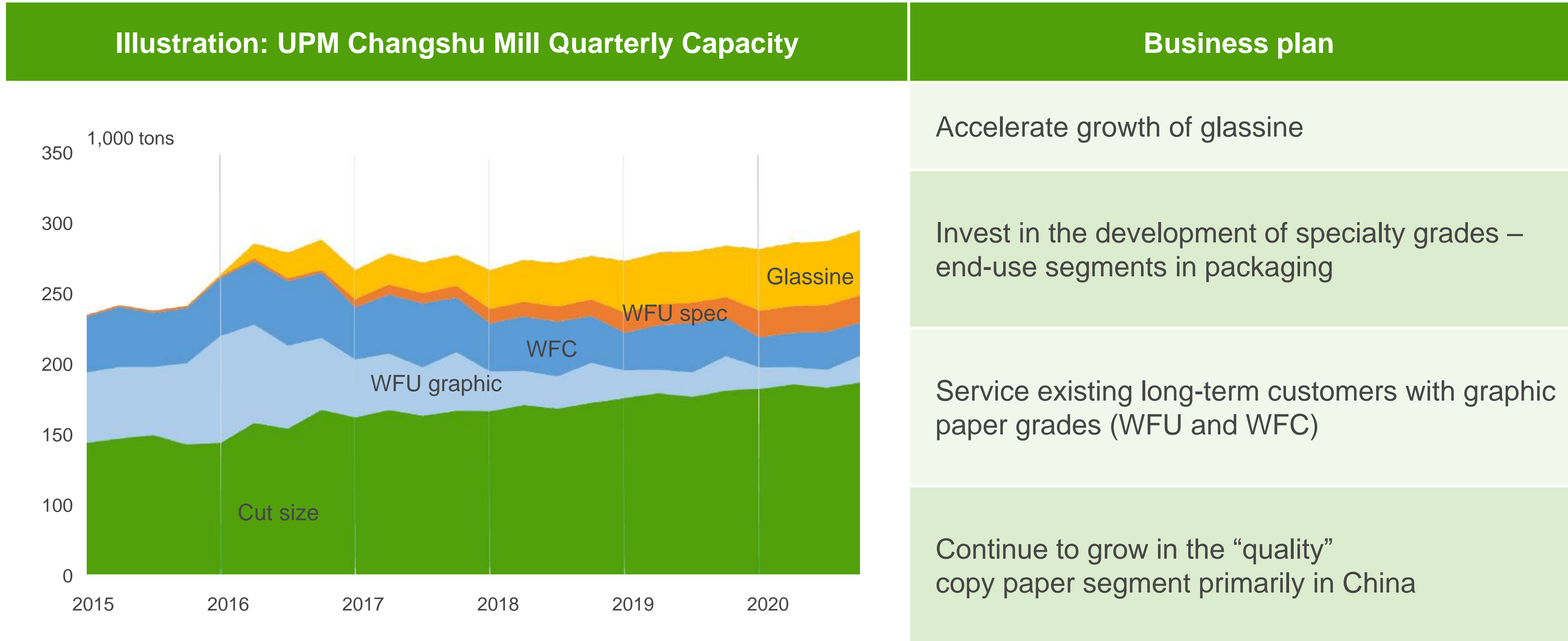
Product functions:

- 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

Changshu mill: focus on growing end uses with a flexible swing production line



WFU: wood free uncoated
 WFC: wood free coated
 Source: UPM

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”

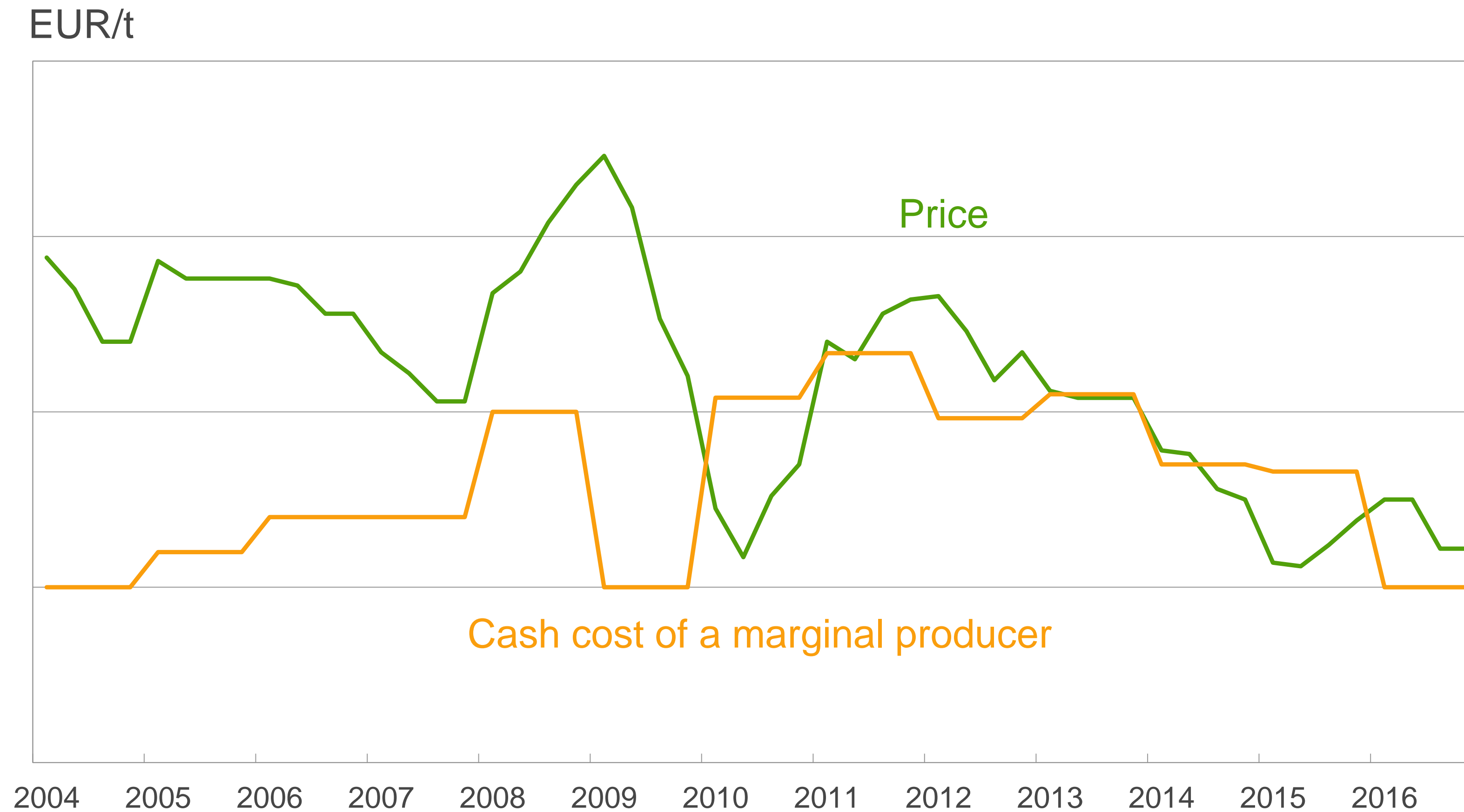


4

Cash flow

“performance management and discipline”

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



Sources: PPI, RISI, Pöyry

UPM Plywood

UPM Plywood in end-use

Construction



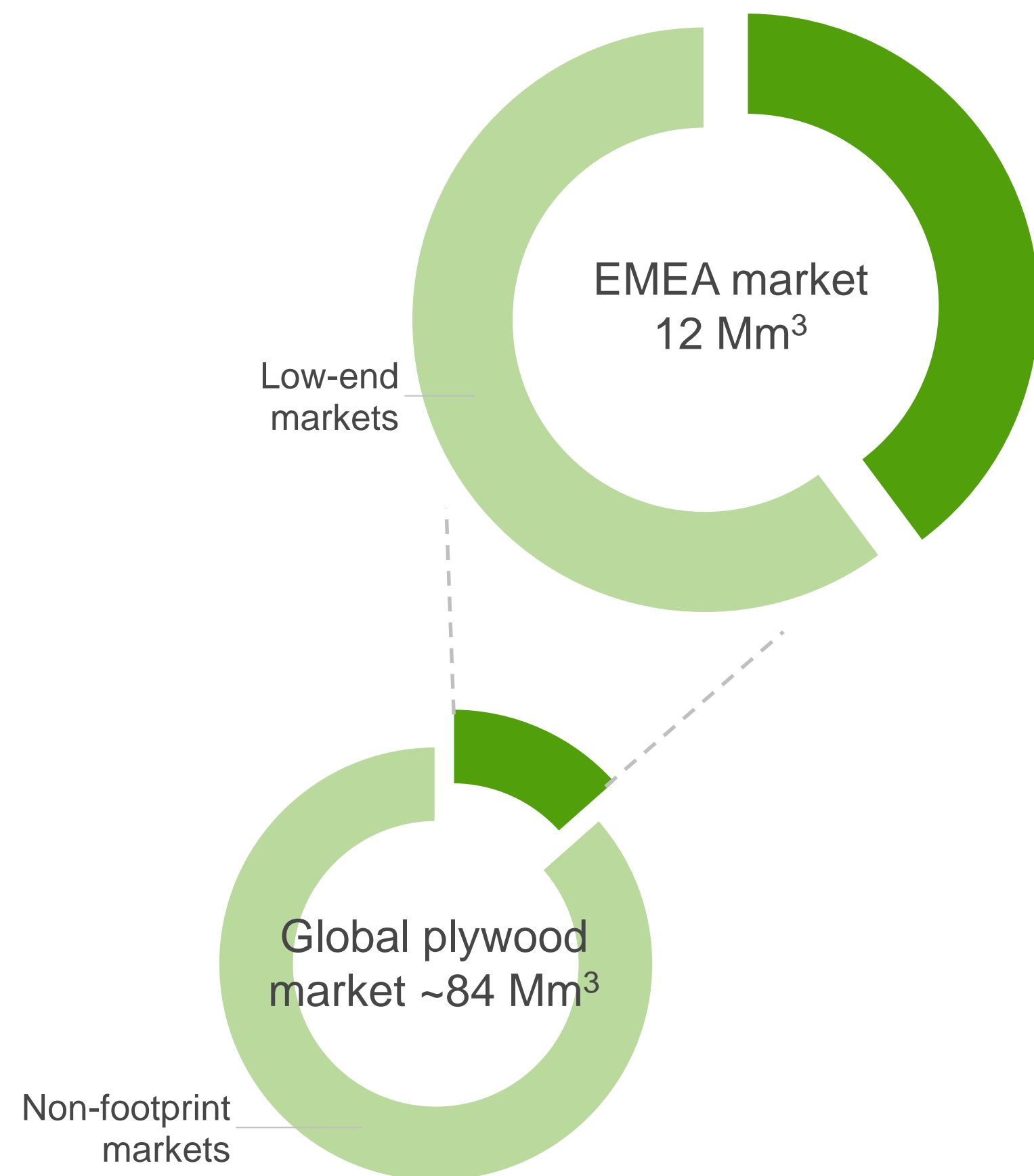
Vehicle flooring



LNG shipbuilding



Relevant high-end market offers meaningful growth potential

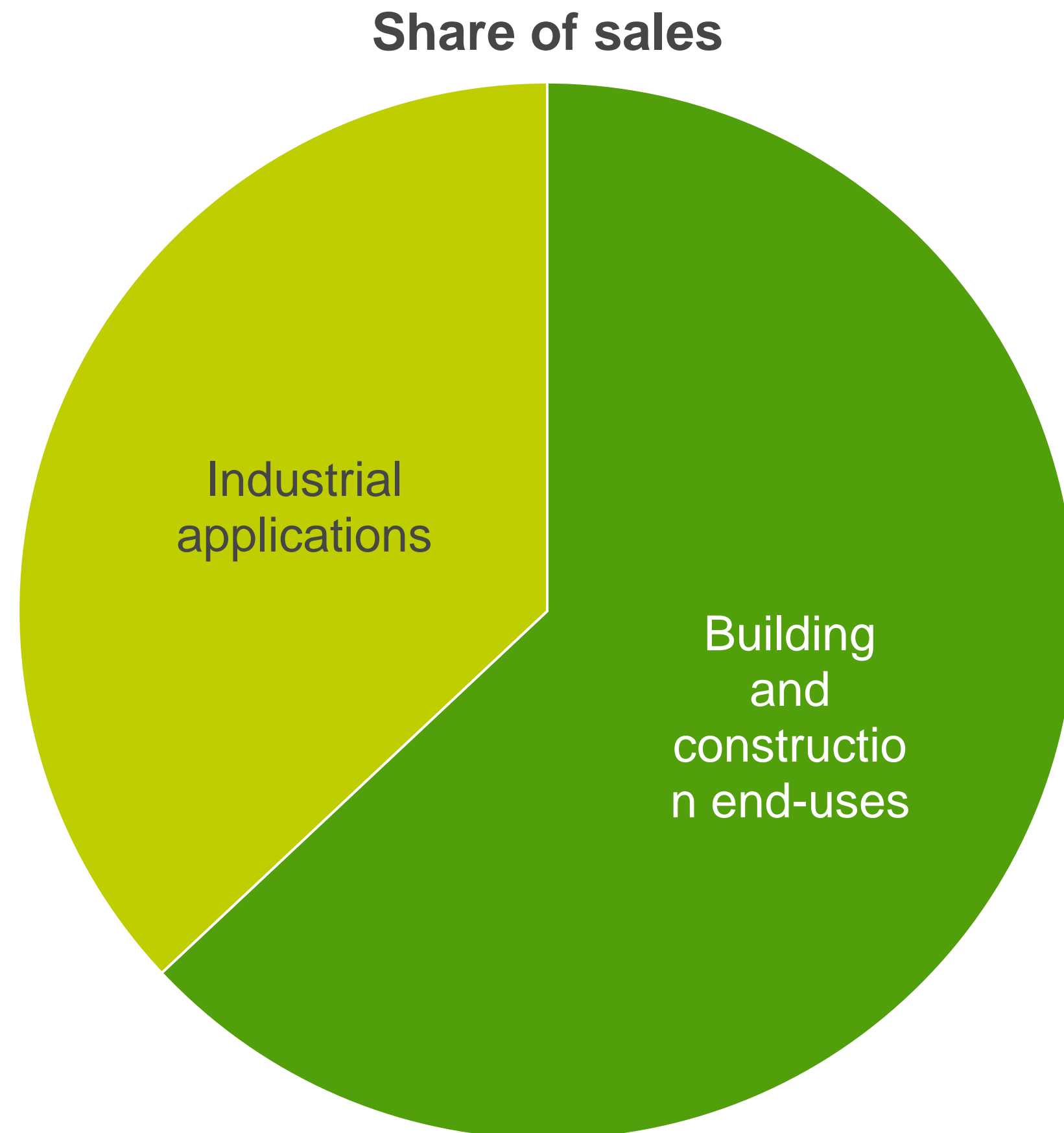


Relevant market ~5 million m³

- High-end demanding applications & customers
 - Medium range standard products
 - EMEA region
 - Global LNG business
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- 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

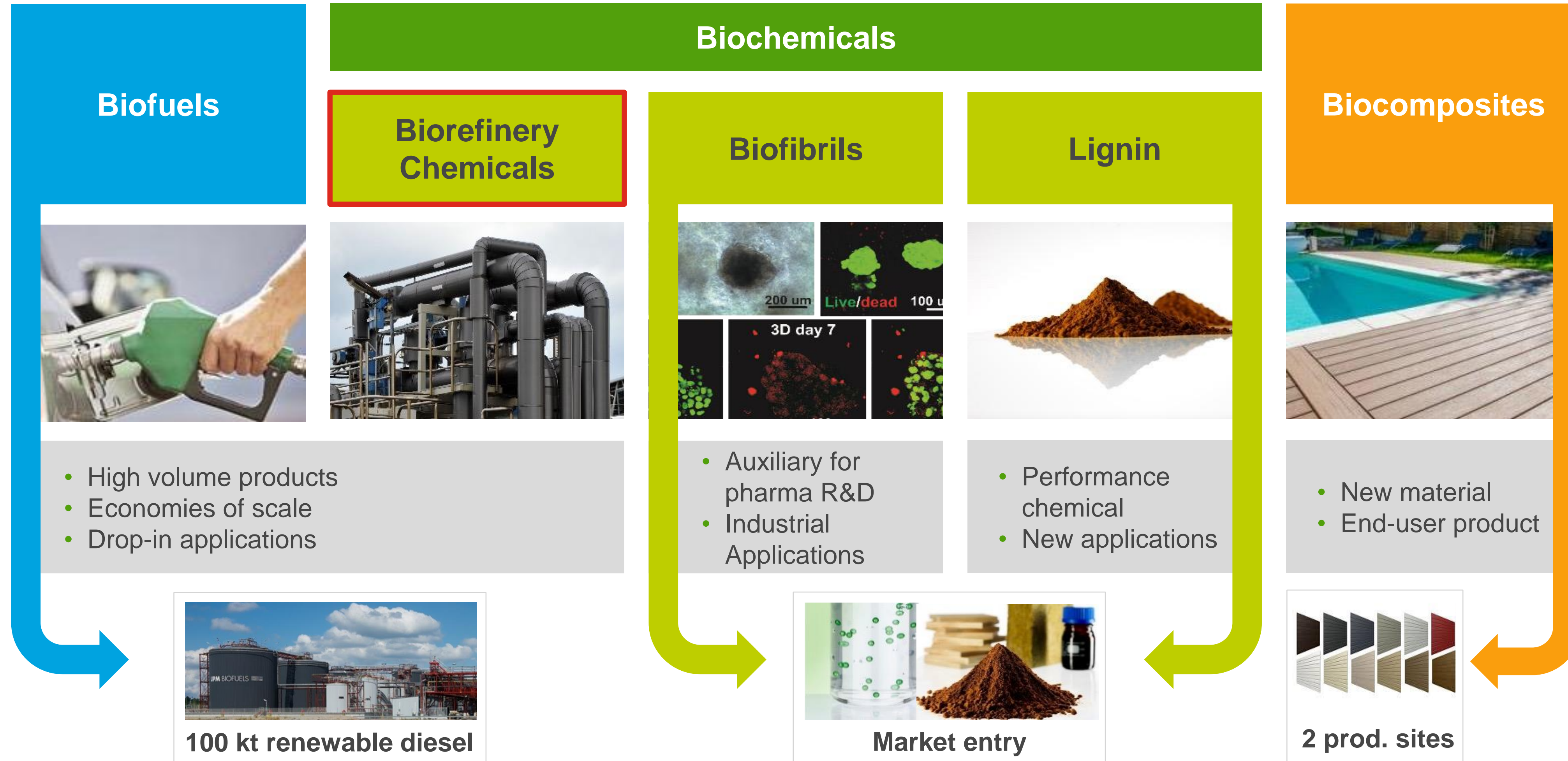


- The recovery of the European construction sector is driving demand (annual growth 2–3% p.a.)
- The financial crisis created a backlog for trailers driving the current replacement need (average growth 4% p.a.)
- The LNG market is expected to remain solid as countries secure energy availability, thereby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

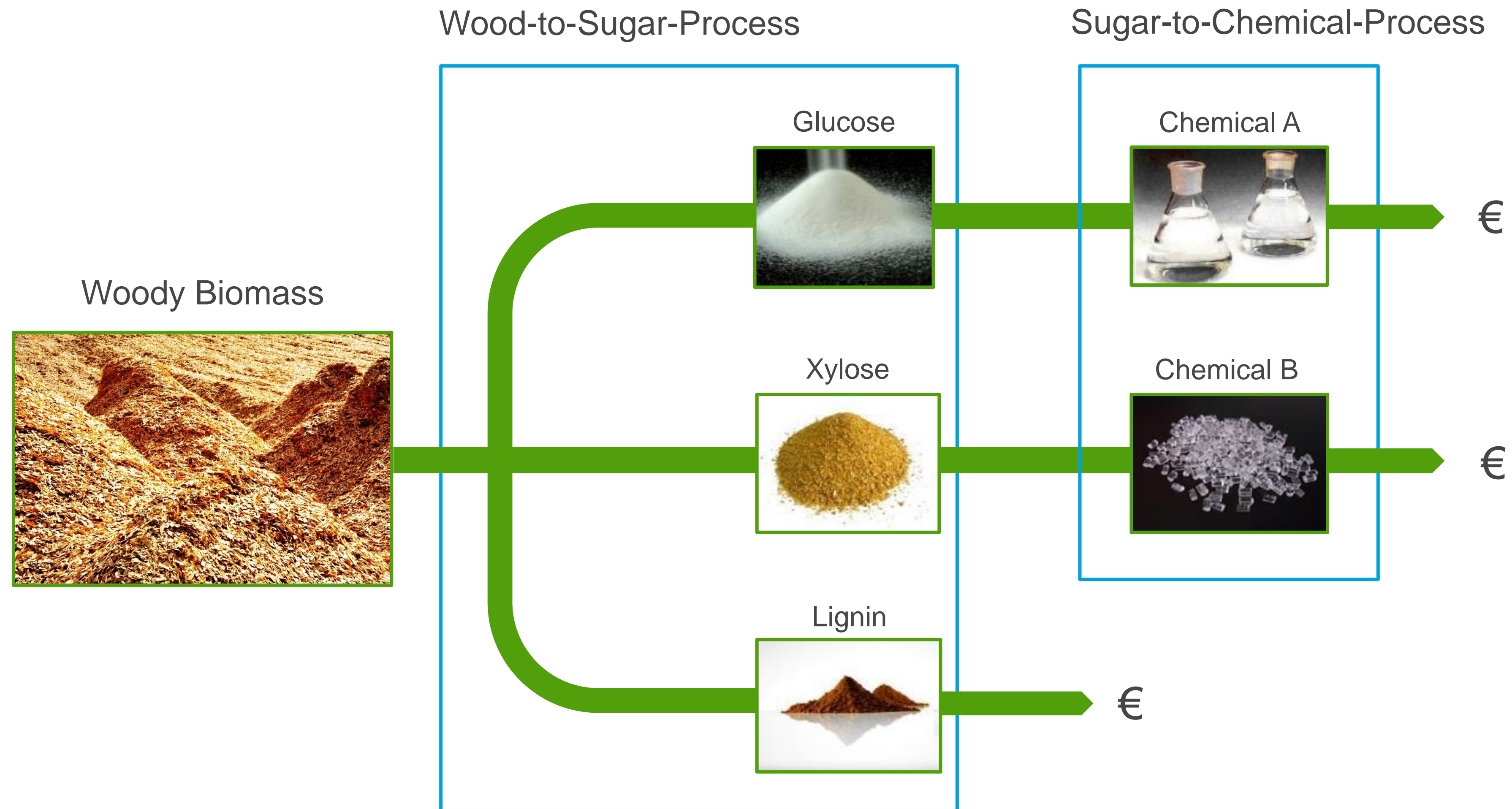
Sources: Euroconstruct, West European trailer registrations for Big 7 Countries (1985–2016), LNG World Shipping



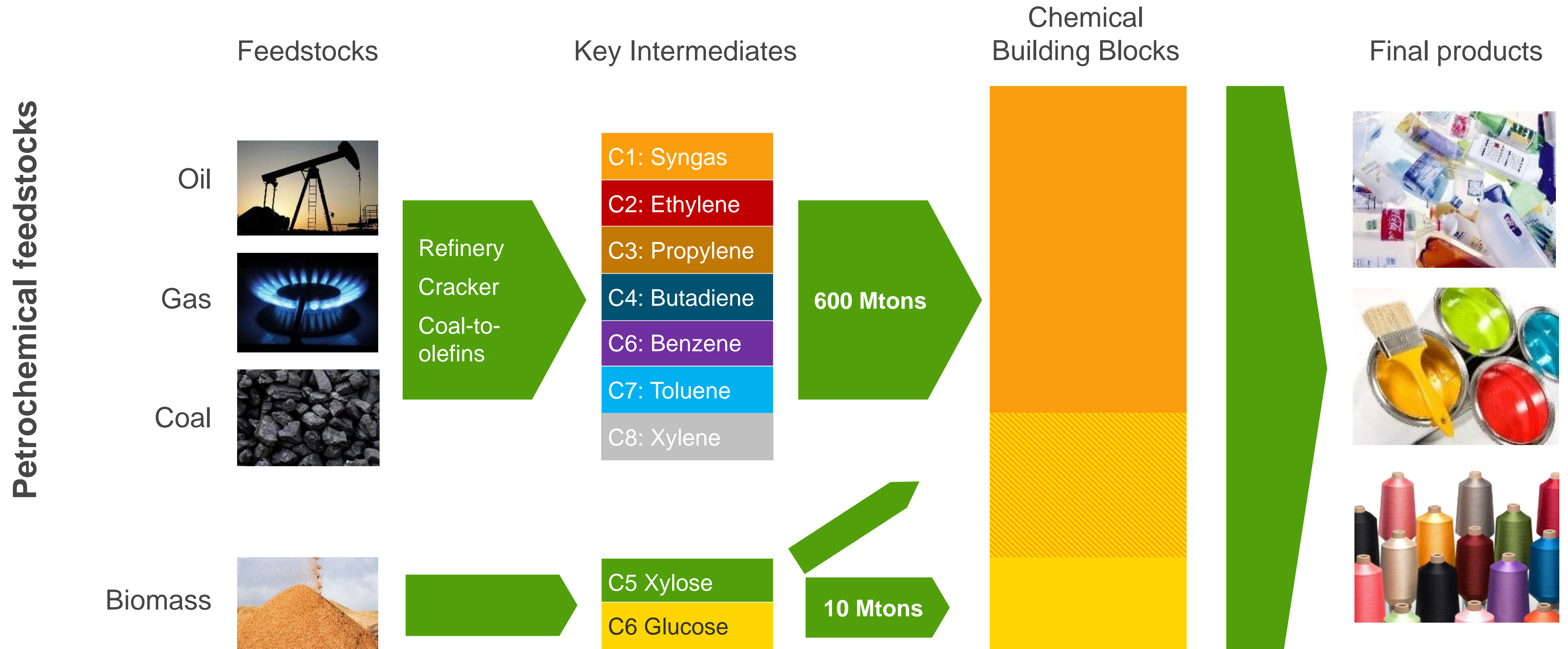
New business opportunities for UPM



New separation technologies ensure best overall value capture



Partial overlap with fossil-based value chains in chemicals





UPM

The Biofore
Company