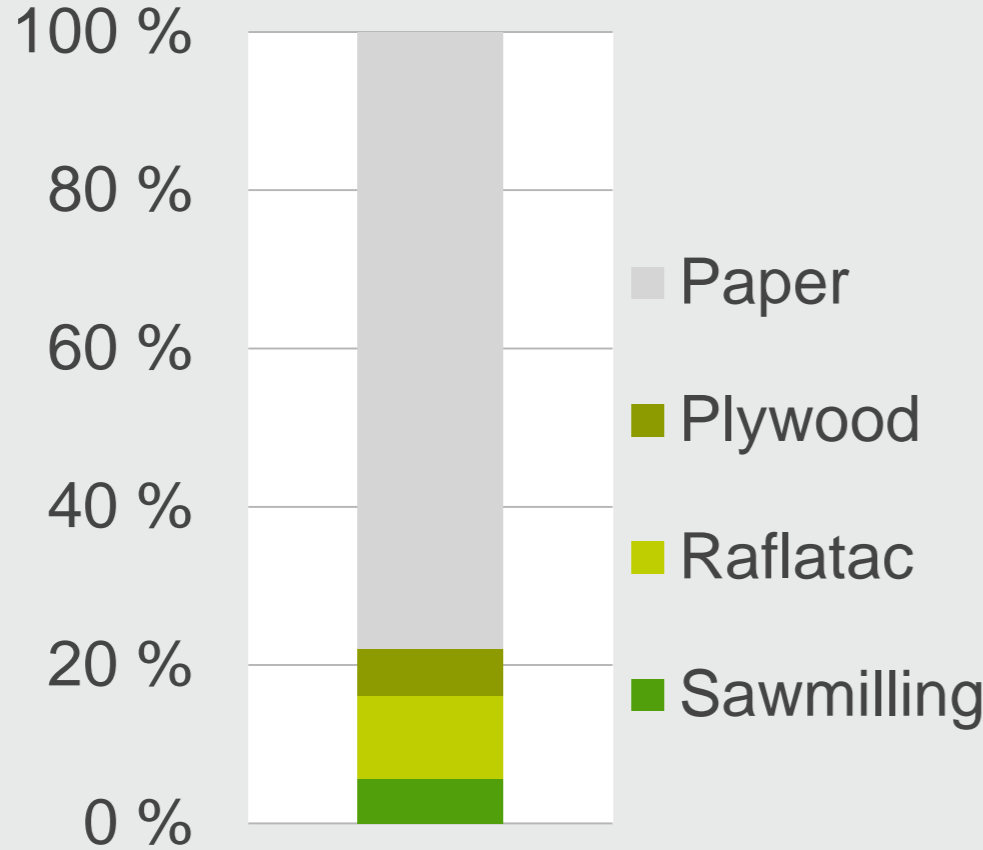
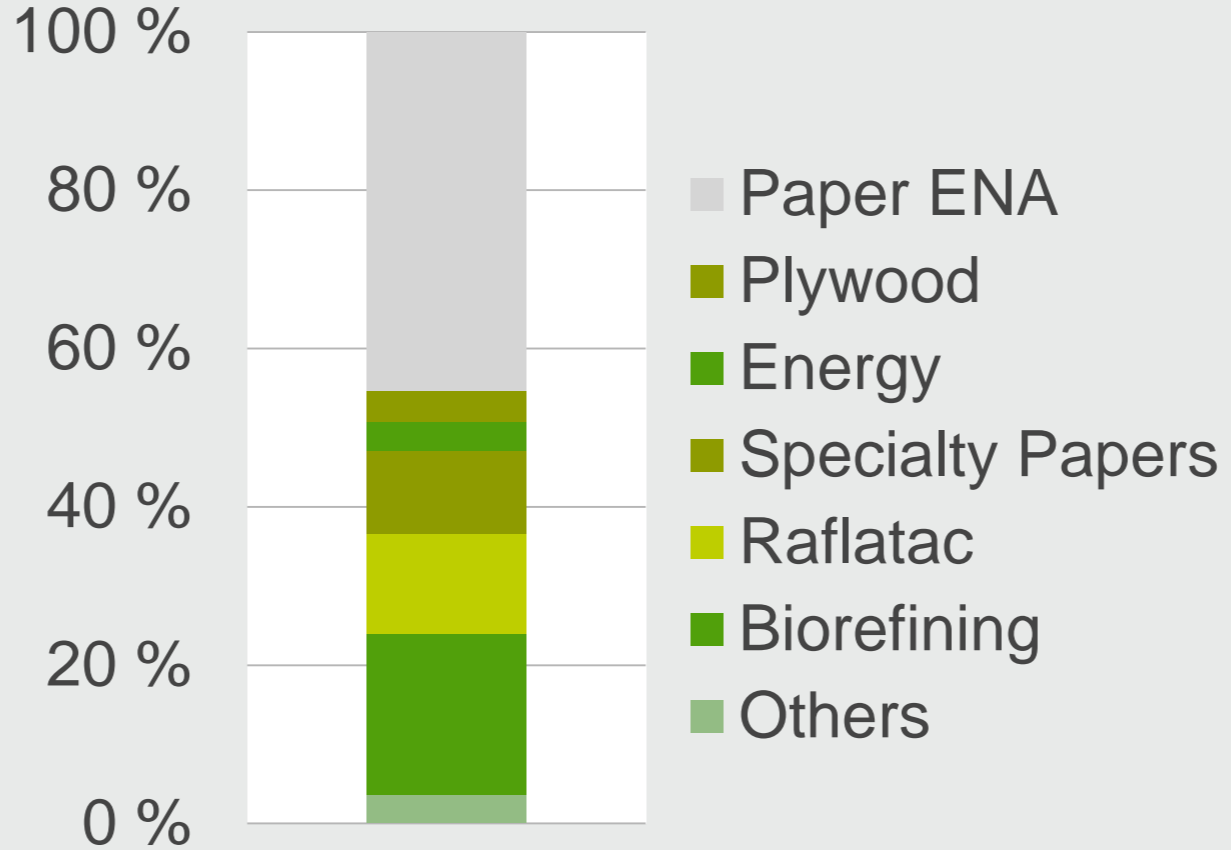


UPM – THE BIOFORE COMPANY

Investor presentation
December 2016



UPM in transformation

	2008 vertically integrated paper company	2015 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 10.1bn	Business performance
EBIT *)	EUR 513m	EUR 916m	Continuous improvement in financial, social and environmental performance
ROE *)	3.5%	9.5%	
Net debt	EUR 4.3bn	EUR 2.1bn	Disciplined capital allocation
Market cap	EUR 4.7bn	EUR 9.2bn	Driving value creation

*) excluding special items for 2008, comparable figures for 2015

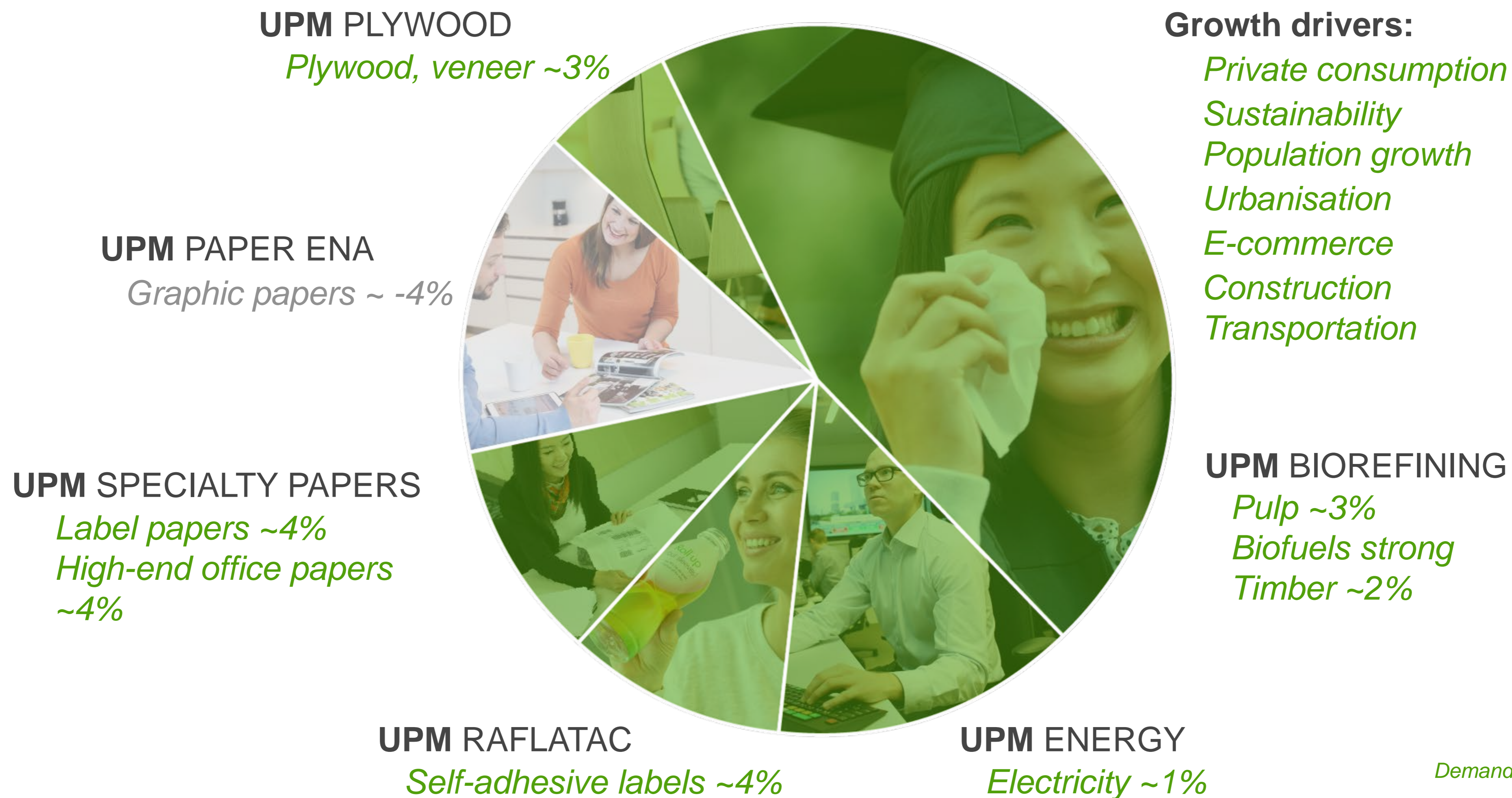
UPM business portfolio today *)

Competitive businesses with strong market positions

Operating on healthily growing markets

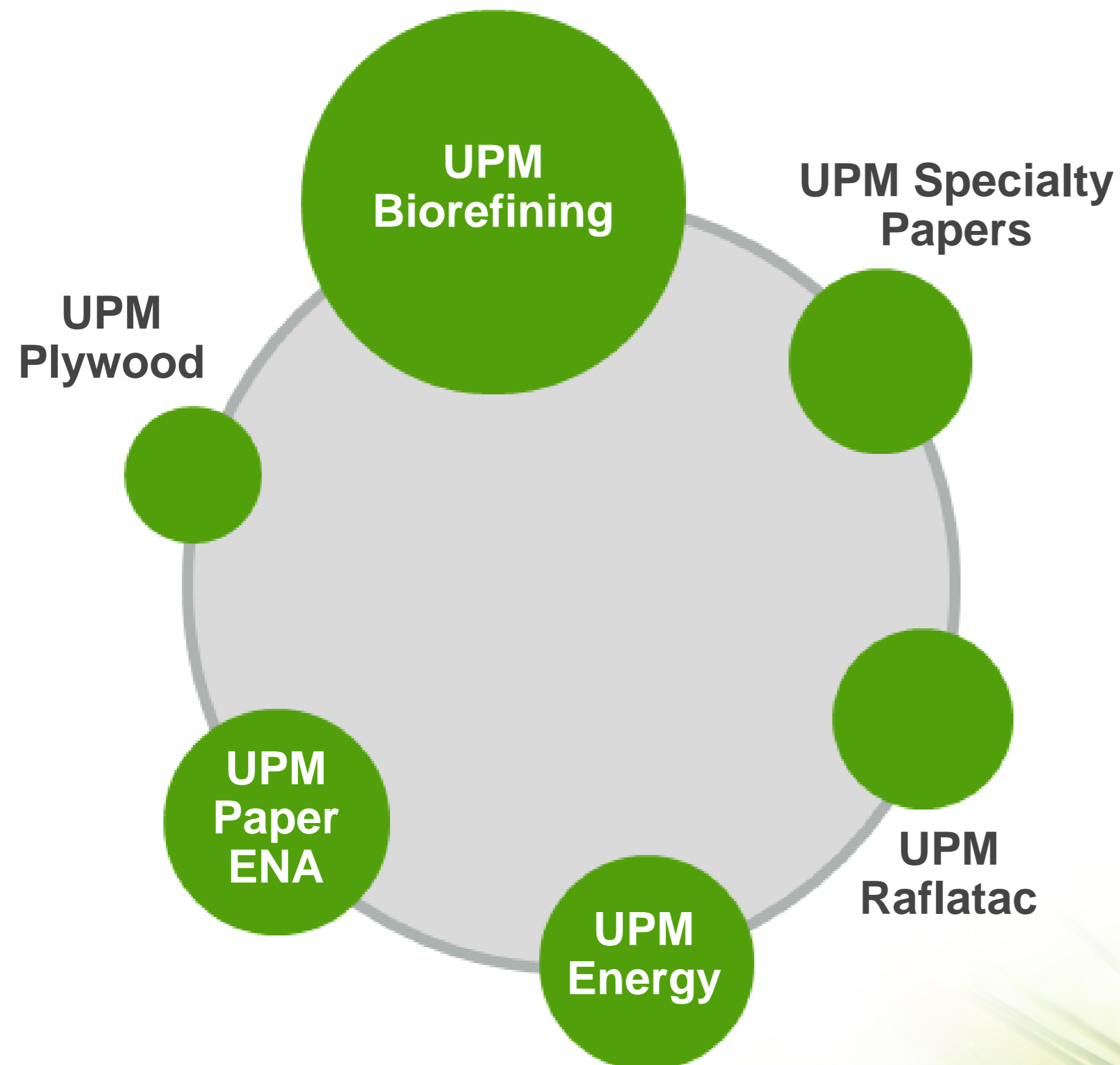


The Biofore Company **UPM**



*) by EBITDA 2015.
Demand trend growth, % pa

Portfolio development: increase long-term shareholder value



- **Developing each business**
Increase their value by driving profitability, growth and cash flow
Commercial strategies, focused growth investments, cost efficiency measures
- **Developing the business portfolio**
Increasing share of businesses with strong long-term fundamentals for profitability and growth
Growth investments, synergistic M&A
- **Portfolio changes**
If it would be the best way to increase long-term shareholder value



Clear roles and decision making on right level

Group

Portfolio strategy
Capital allocation
Business targets
Code of conduct
Responsibility targets

Businesses

Business area strategies
Commercial excellence
Operational excellence
Cost efficiency measures
Focused growth projects
Innovation

Outcomes

Top performance
Competitive advantage
Value creation
Stakeholder value
License to operate

Business model case: market-driven value creation in the labelling value chain



Growing markets and end-uses, diverse customer needs

Focused growth investments

Commercial strategies, product and mix development, R&D

Transparency, benchmarking, targets, incentives

Agility, improved efficiency

Optimised sourcing, R&D

- + Growing sales
- + Increased EBIT, CF
- + Higher ROCE

Business model case: market-driven value creation at UPM Kymi pulp and paper mill

Growing pulp markets and end-uses

Customers

Tissue
Spec. papers
Board, etc.

A B C
↑ ↑ ↑



P&L

Maintain synergies

Pulp mill
530 + 340 = 870kt
UPM Biorefining

Focused growth investments

A B C
↑ ↑ ↑

Forest, Other

Customers

Advertisers
Printers
Mechants, etc.

A B C
↑ ↑ ↑



P&L

Paper mill
800kt
UPM Paper ENA

- Different paper end-use trends
- Commercial strategies, product mix and service development
- Transparency, benchmarking, targets, incentives
- Agility, improved efficiency
- Optimised sourcing, raw material mix

A B C
↑ ↑ ↑

Fibre, Other

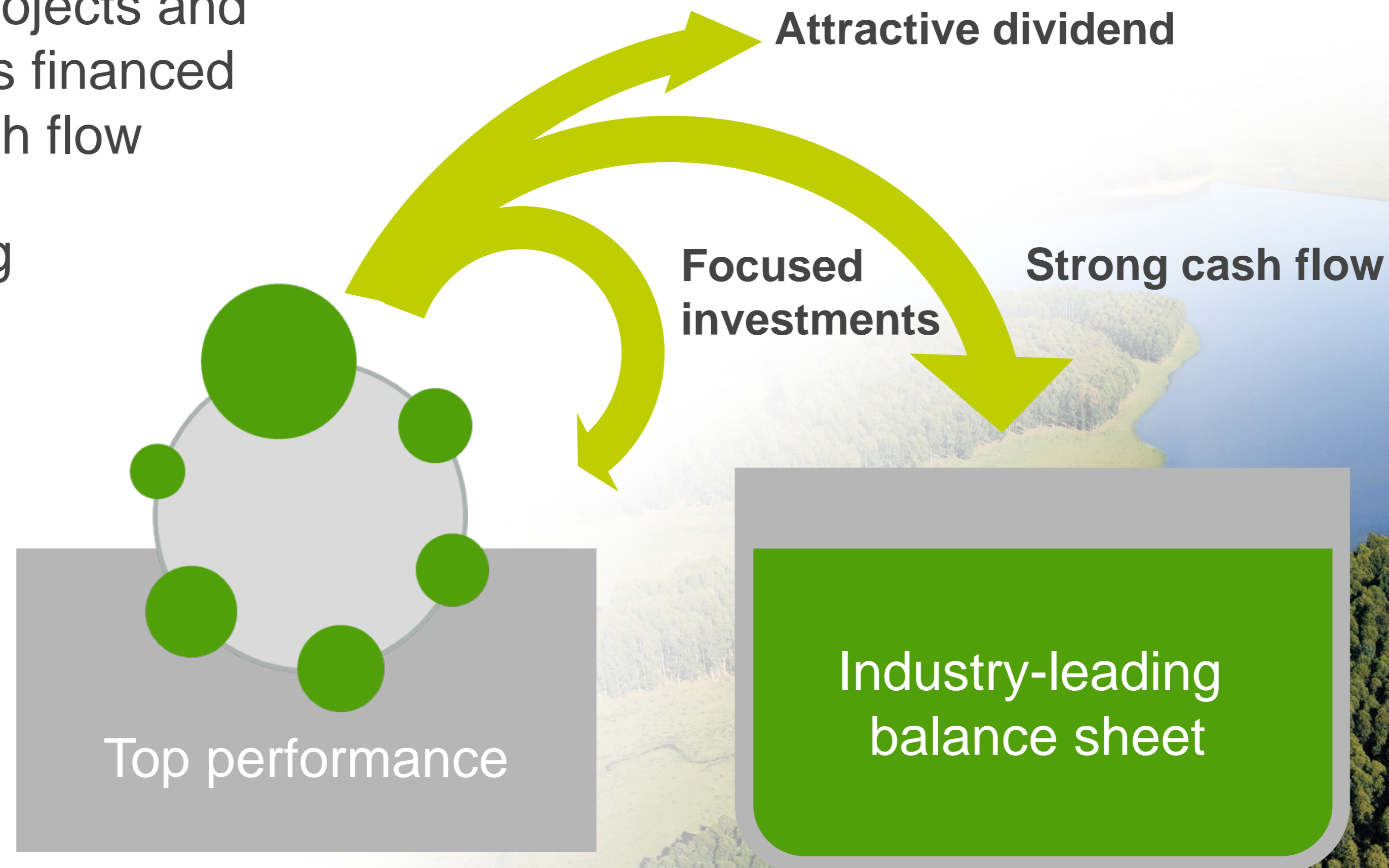
- + Growing sales
- + Increased EBIT, CF
- + Higher ROCE



Disciplined capital allocation

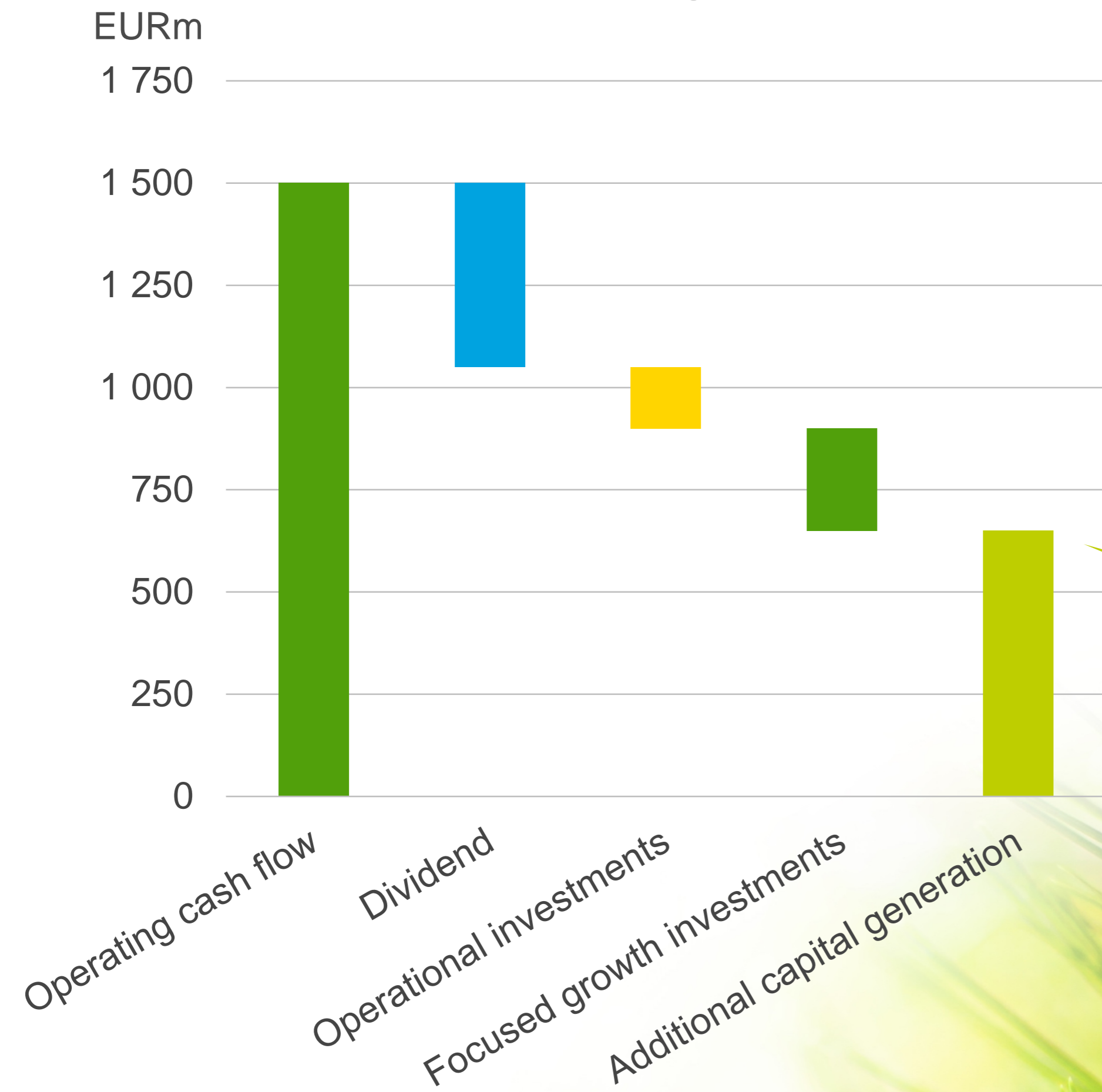
Focused growth projects and attractive dividends financed from operating cash flow

Consistently strong balance sheet



Continuous free cash flow generation opens value creation options

Illustrative: LTM Q2 operating cash flow EUR 1,528m



Robust cash flow

- Operating cash flow in 2014–LTM Q2 EUR 1.2bn–1.5bn

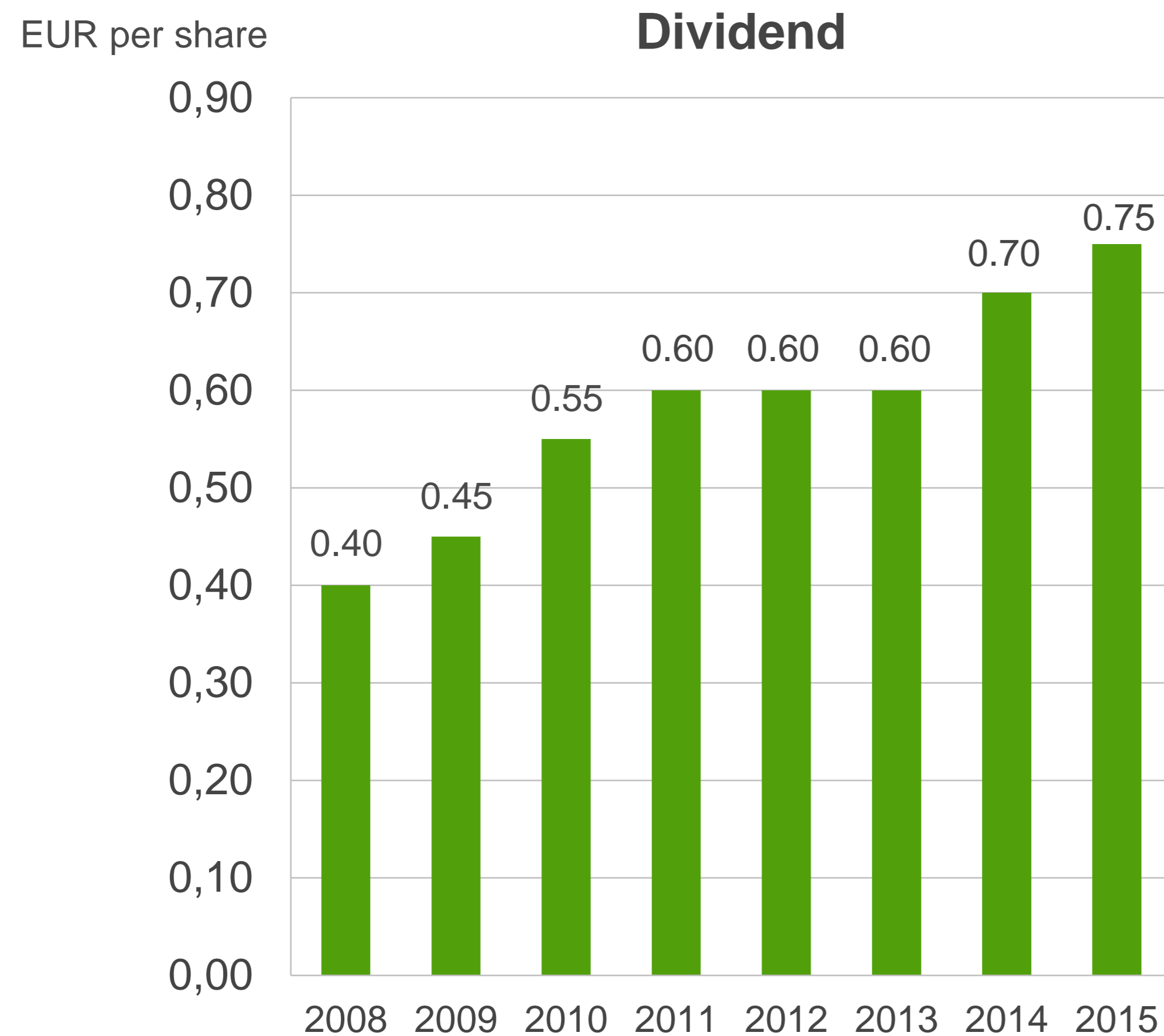
Capital allocation

- Dividend policy: 30–40% of operating cash flow
- Low operational capex needs
- Focused growth investments

Additional capital generation

- EUR 400–650m per annum

Attractive dividend supported by increasing operating cash flow



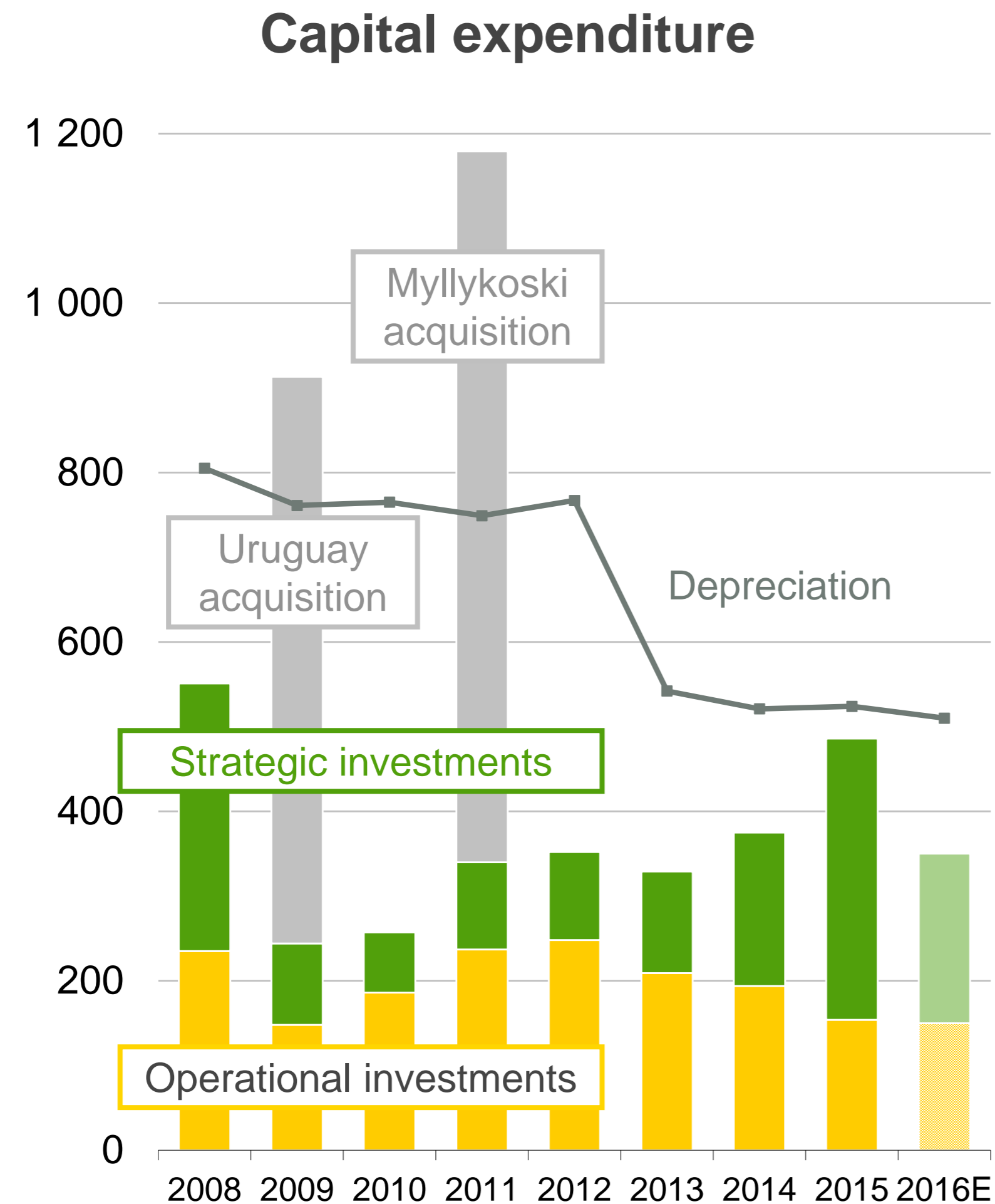
Dividend policy

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

Dividend for 2015

- EUR 0.75 (0.70) per share, totalling EUR 400m
- 34% of 2015 operating cash flow (EUR 1,185m)

UPM will continue to invest on growth through focused growth projects with modest total capex



Focused growth investments

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

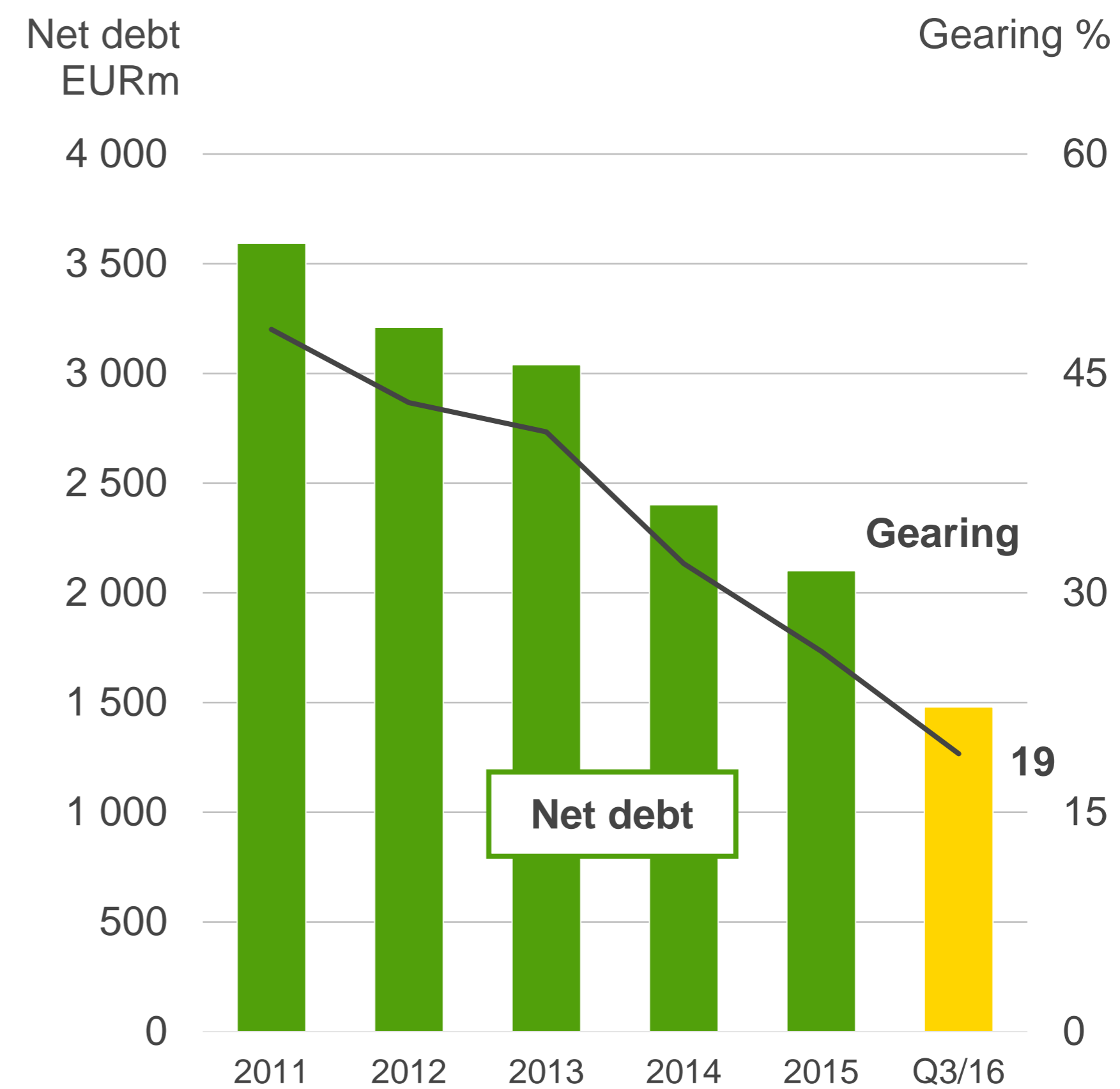
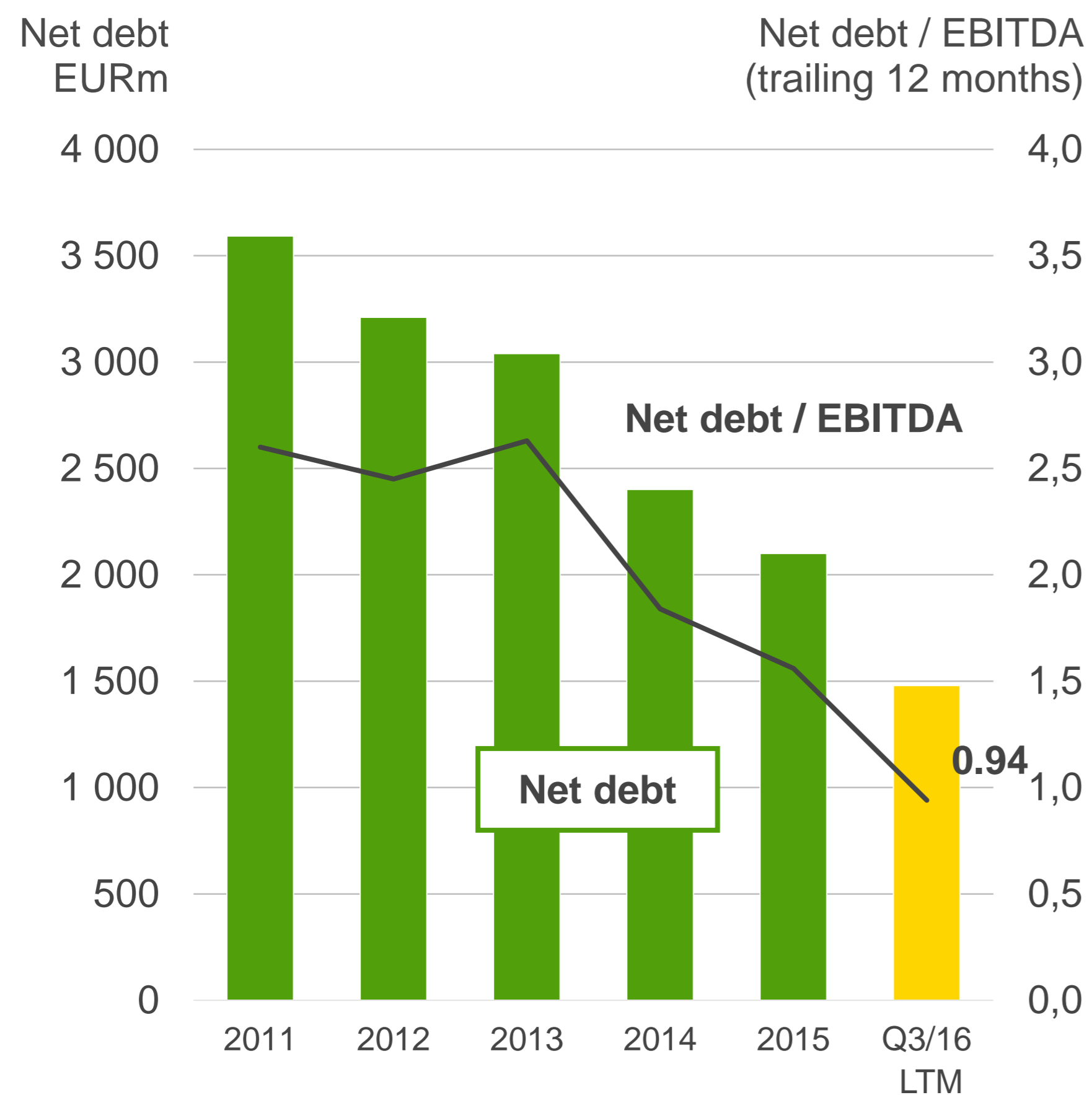
Low replacement investments

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

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



UPM aims to maintain strong balance sheet





Value creating capital allocation options

Annual cash flow

- Focused growth investments, focused M&A
- Distribution to shareholders
- Debt reduction

Balance sheet

- M&A, when the opportunity and timing are right
 - Continues the business portfolio transformation
 - Synergistic with attractive returns
 - In the businesses where UPM is investing on growth
- Next step in pulp, if the prerequisites are in place and the opportunity and timing are right
- In all cases, UPM aims to maintain strong balance sheet

Focused growth investments contributed significantly to Q3 2016 results



Fully contributing in 2016

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



Ramp-up progressing well

- Lappeenranta biorefinery
- Changshu speciality papers

Capex EUR 680m
Capacity ~800kt
+ label stock

80% run-rate of the EUR 200m EBITDA target achieved in Q3 2016



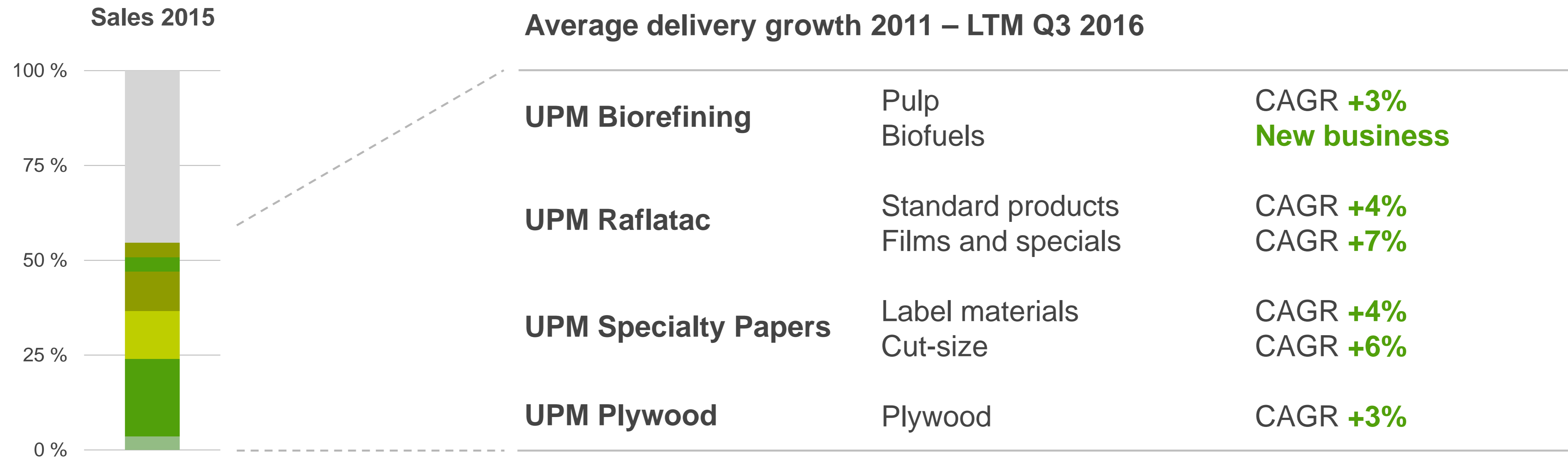
Ramp-up starting, or under construction

- Otepää plywood mill expansion
- Kaukas pulp mill efficiency
- Kymi pulp mill expansion
- Raflatac expansion in Poland

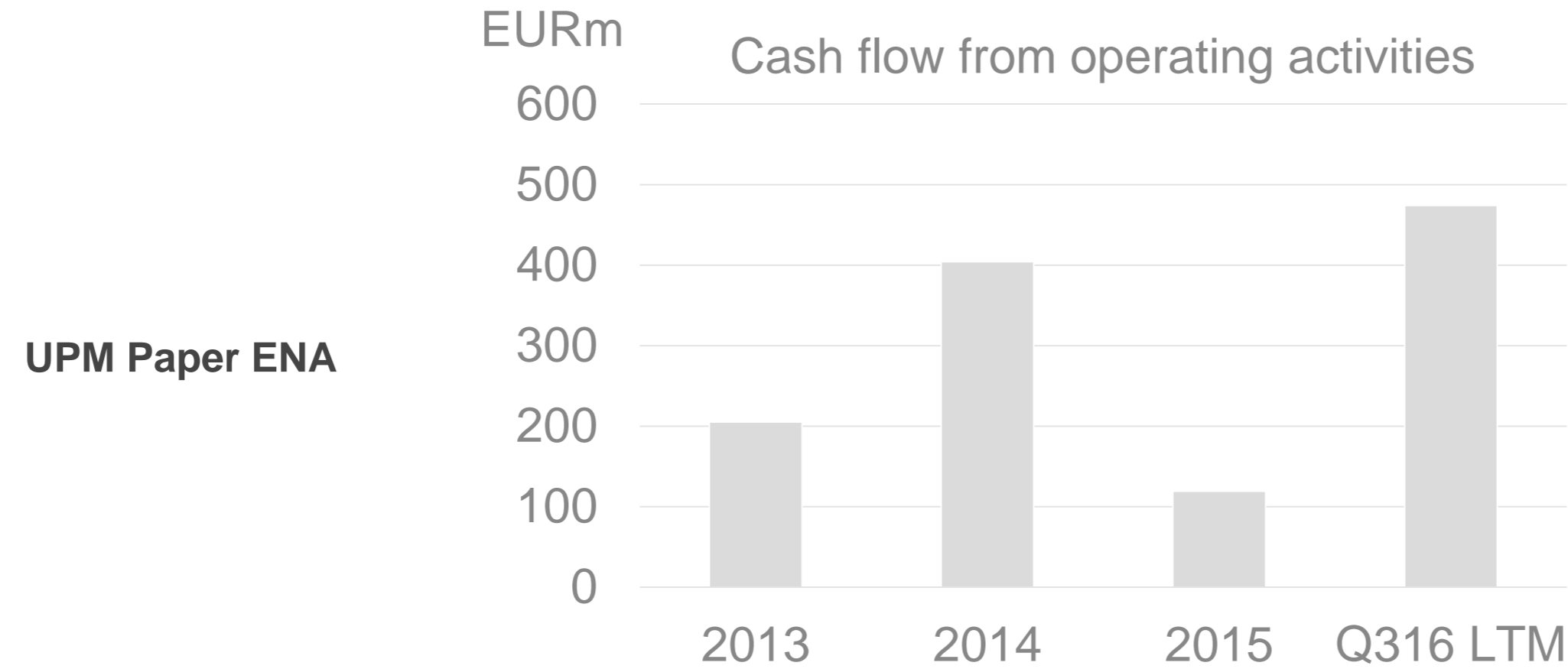
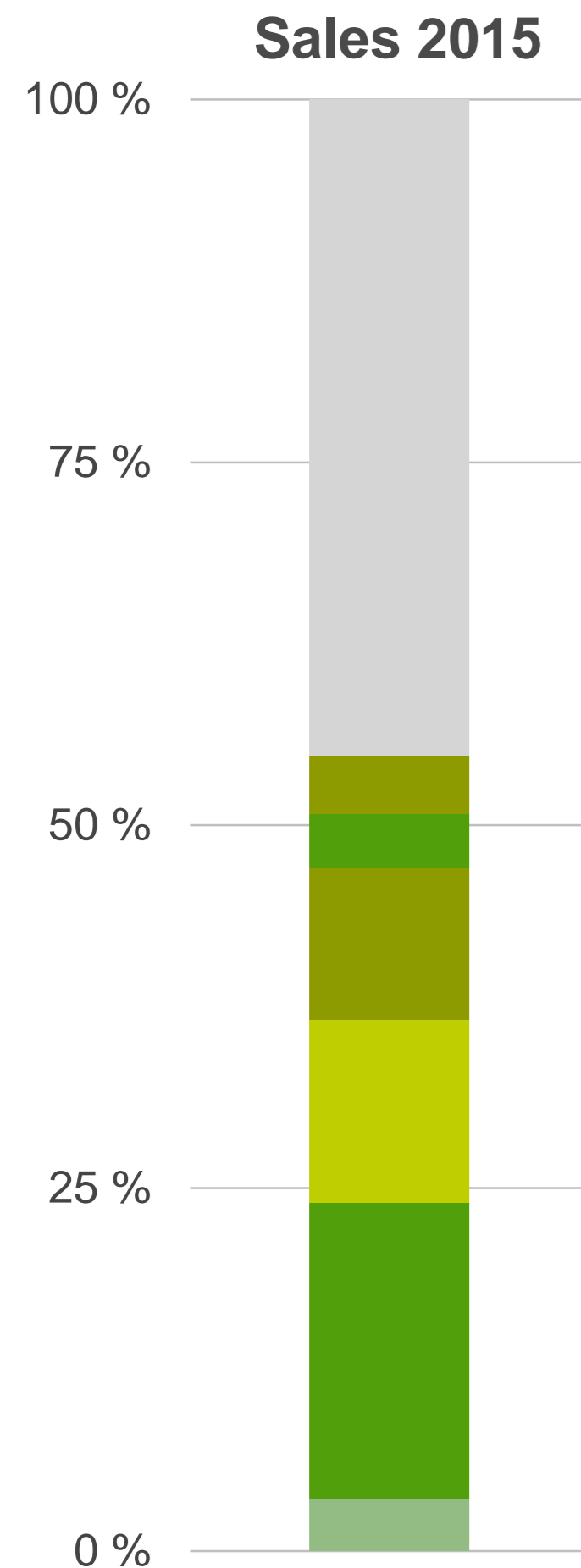
Capex EUR 225m
Capacity ~200kt,
+ plywood + label stock



Focused investments are delivering growth

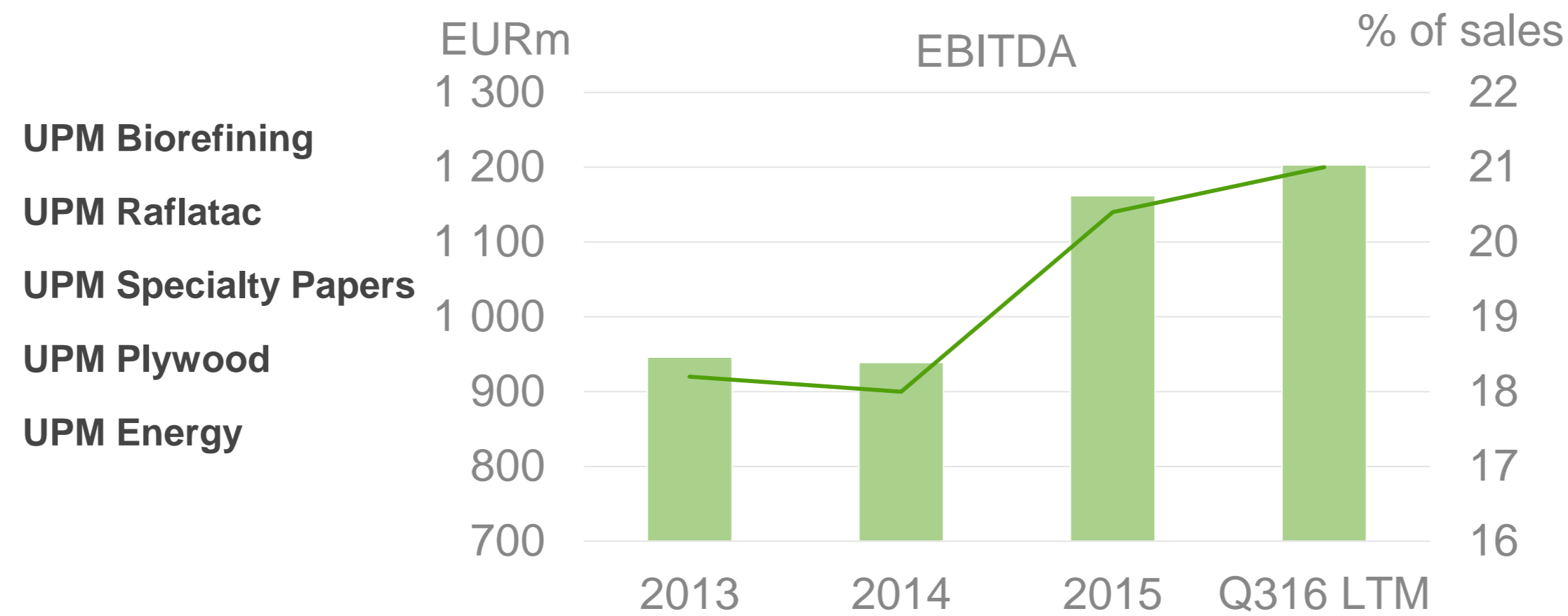


Value creation through cash generation and sustainable growth



Maintain strong cash flow

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



Sustainable growth

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

Portfolio of opportunities within UPM's disciplined capital allocation

Pulp

- **Focused growth investments, major investments, M&A**
Decisions and timing based on the merits of each case
-

Raflatac Speciality papers Plywood Energy

- **Focused growth investments, M&A**
Decisions and timing based on the merits of each case
-

Biofuels Biochemicals

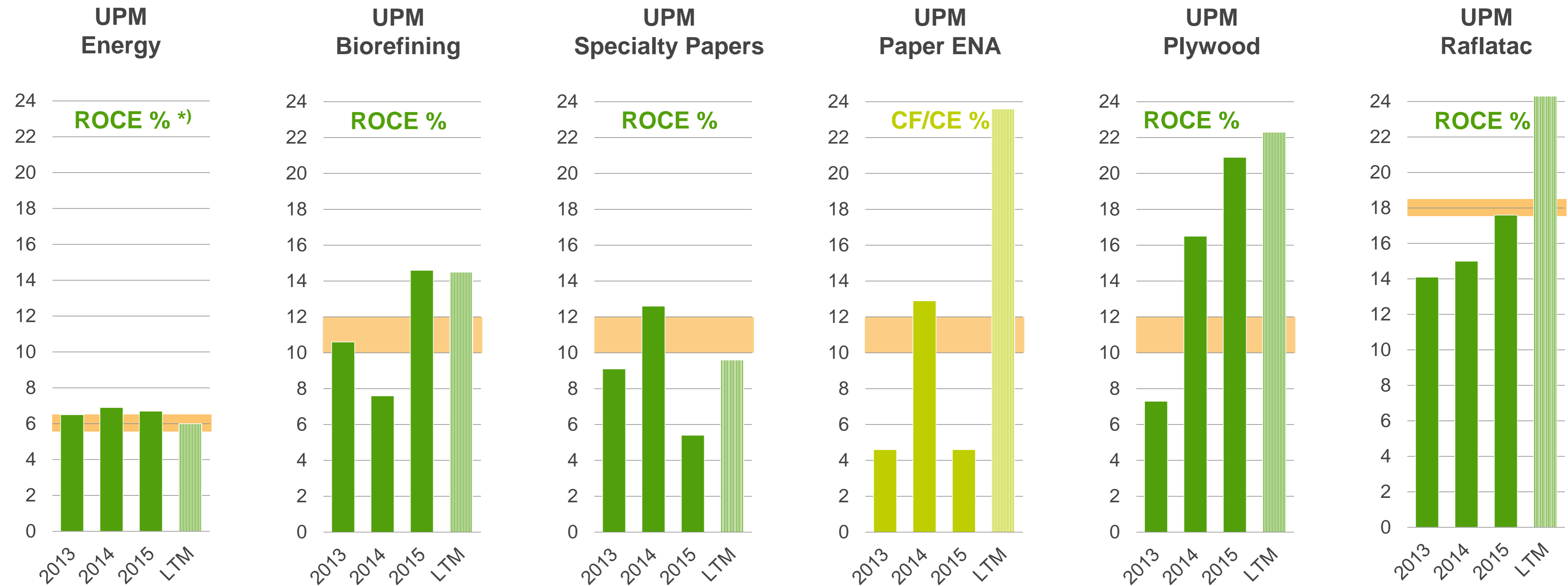
- **Focused growth investments, M&A, new business creation**
Decisions and timing based on the merits of each case
-

Paper ENA

- **Cash flow and release of capital**
Efficient and competitive business system



Business area returns and targets



Each business targets top relative performance in their respective markets

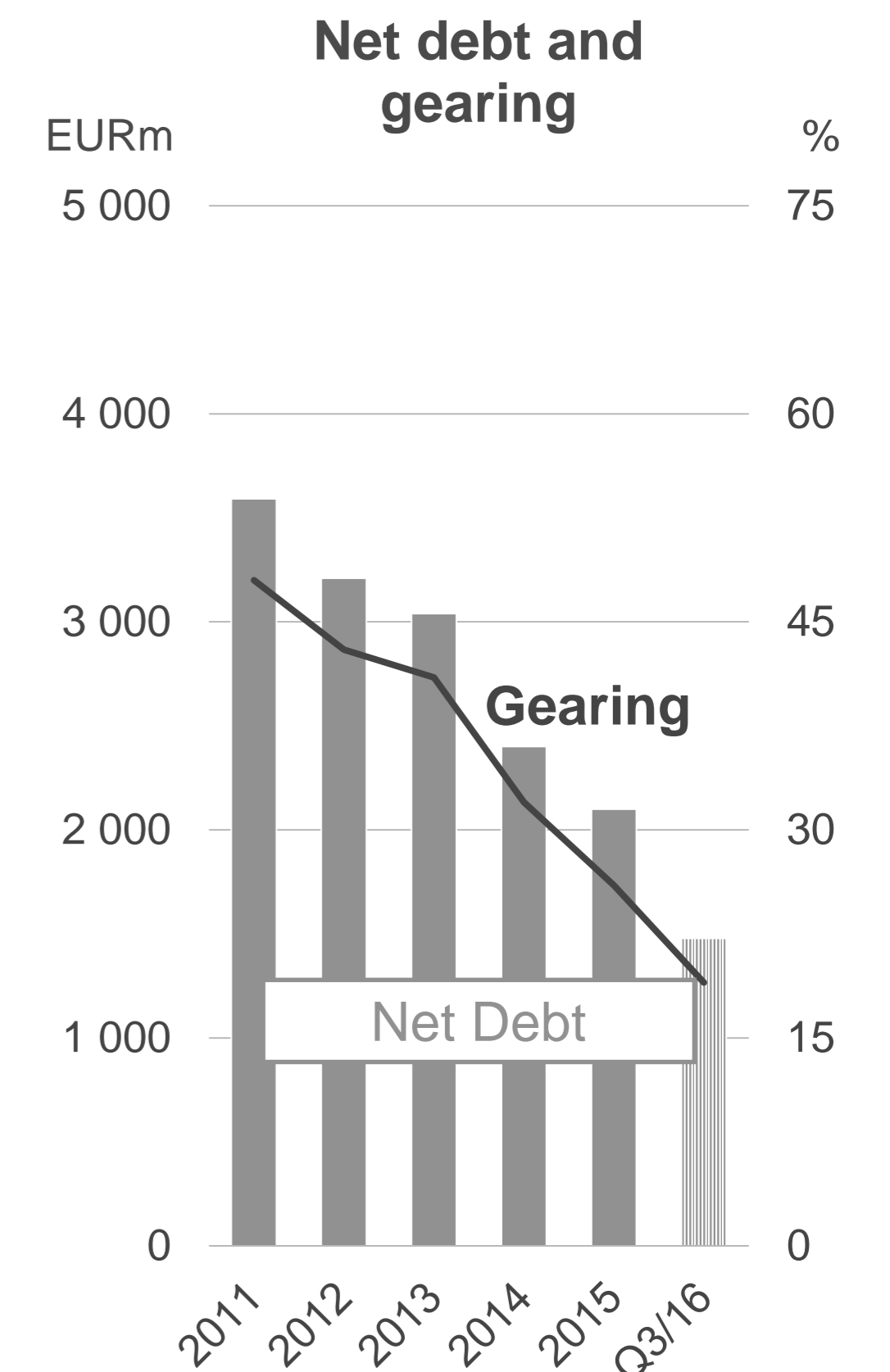
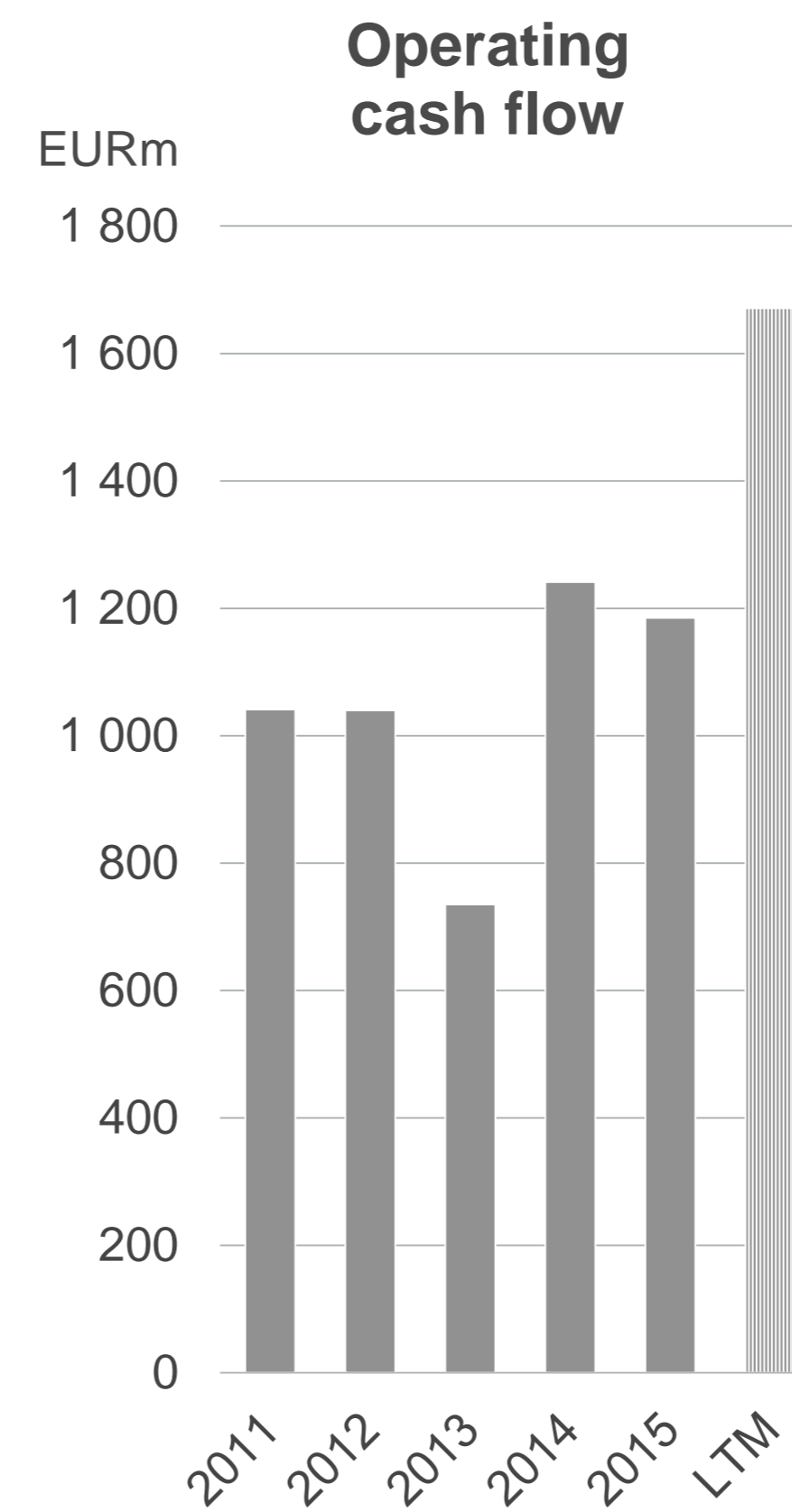
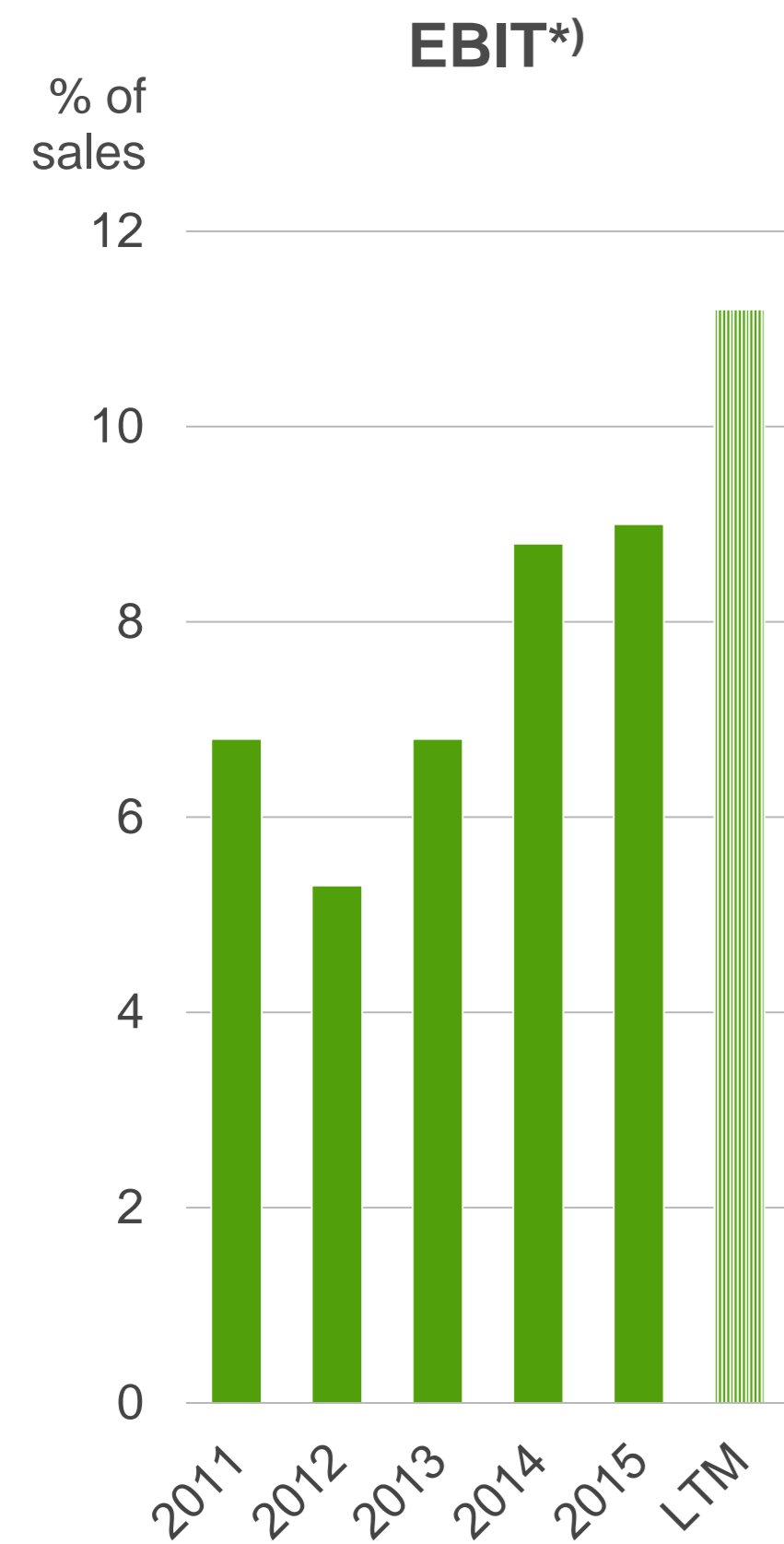
*) shareholdings in UPM Energy valued at fair value



Long-term return target



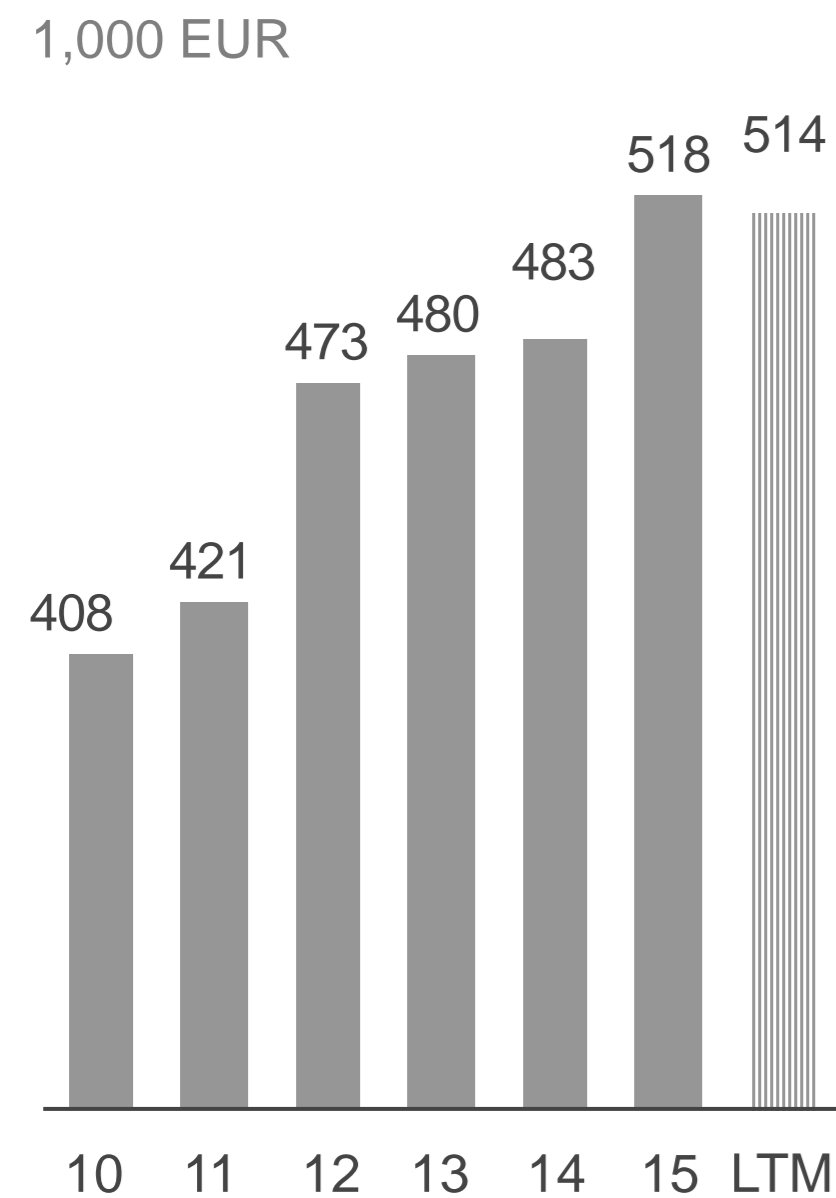
Group financial performance



*) comparable figures for 2015 and 2014, excluding special items for earlier years

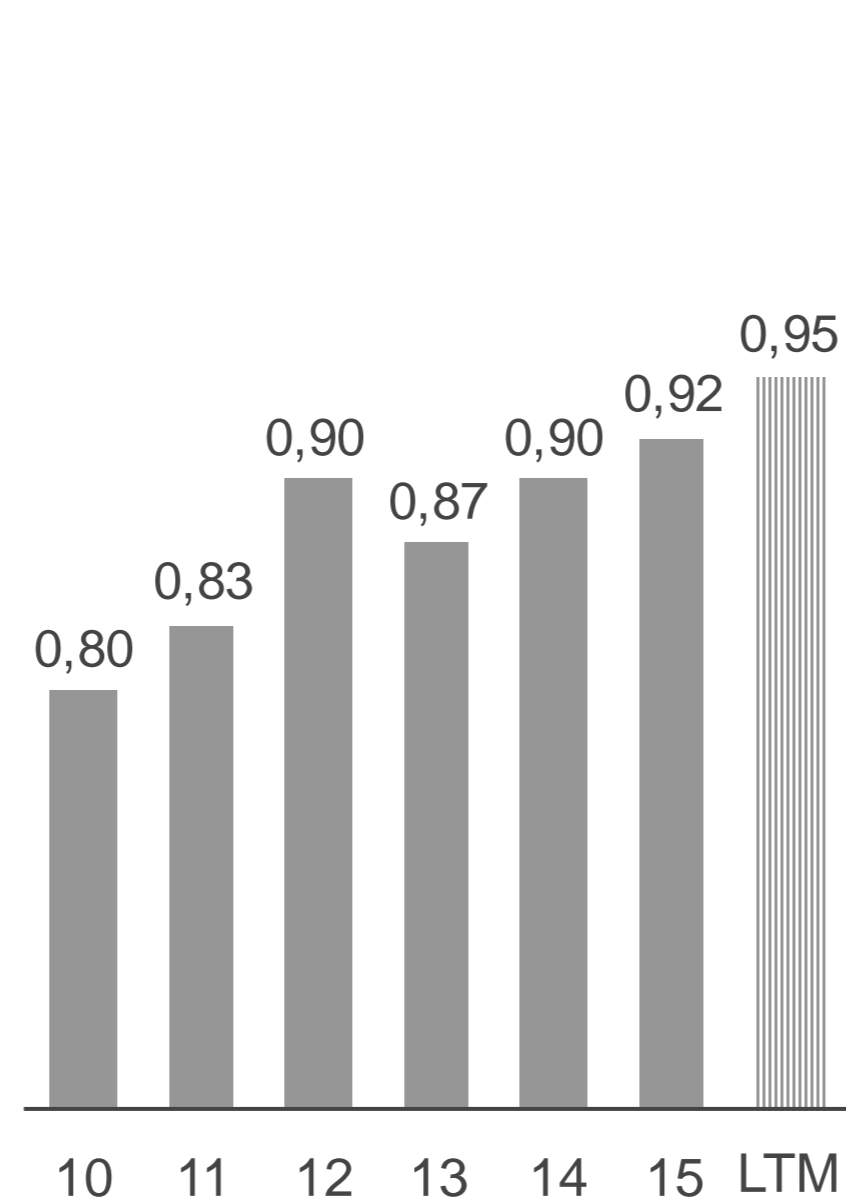
Consistent improvement

Productivity
Sales / employee



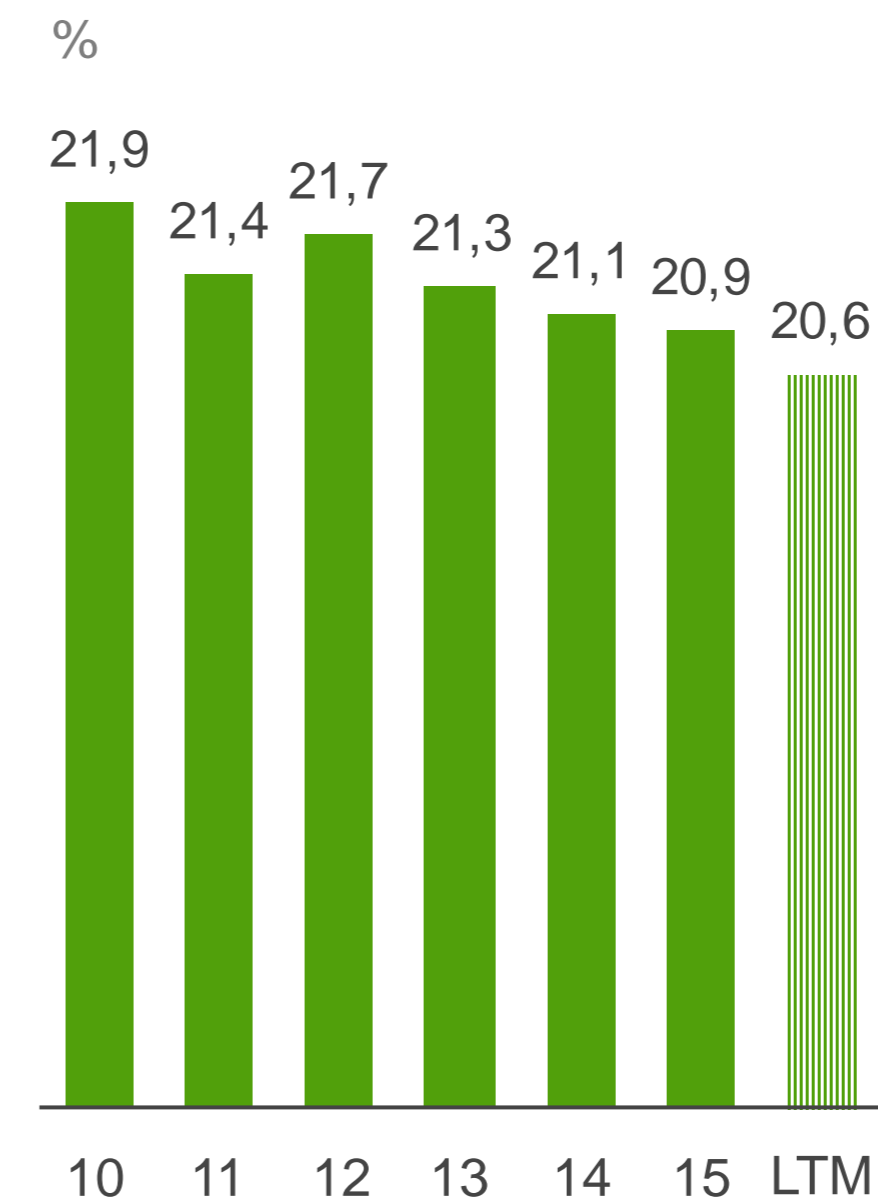
Commercial strategies
Efficient use of assets
Focused investments

Capital turnover
Sales / CE



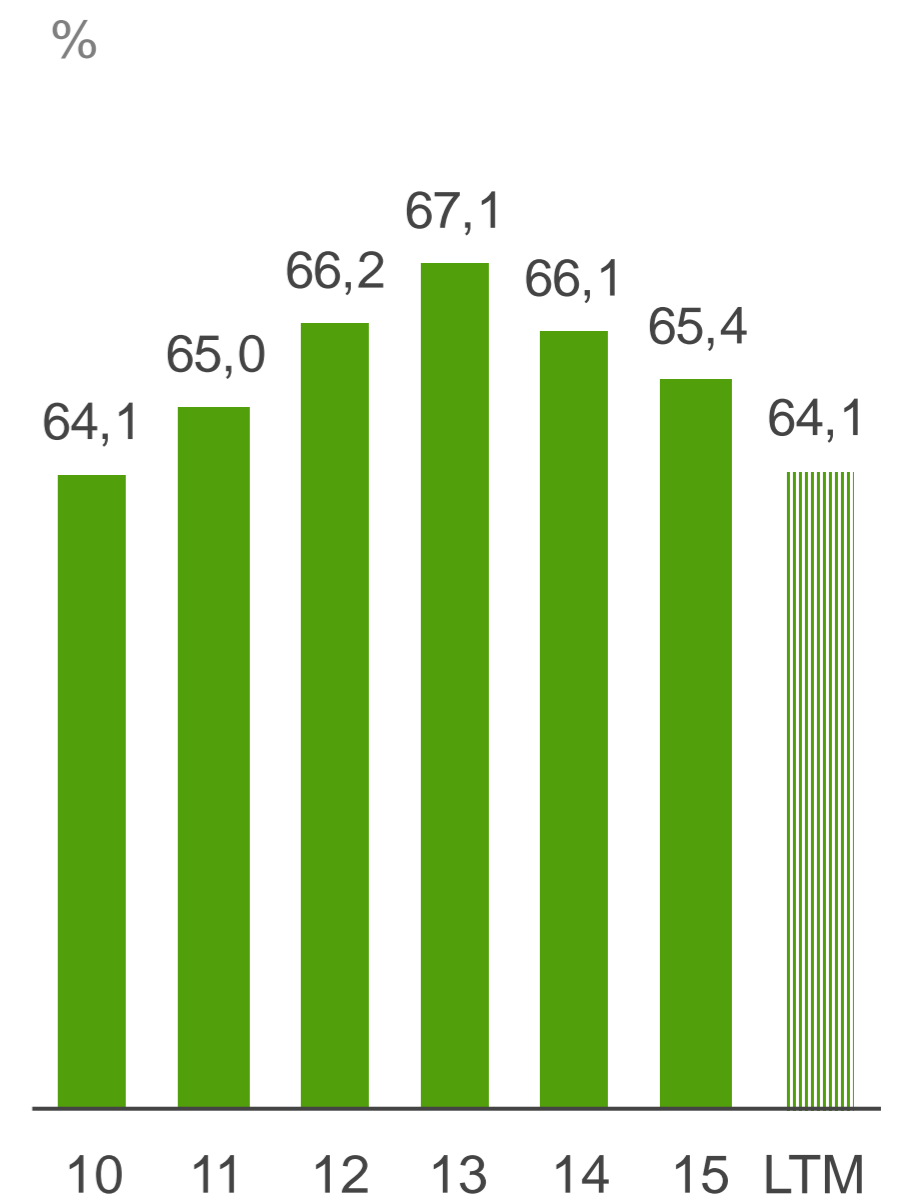
Capital allocation
Focused investments
Efficient use of assets
WOC management

Fixed costs
Fixed cost / sales



Commercial strategies
Efficient use of assets
Restructuring
Maintenance

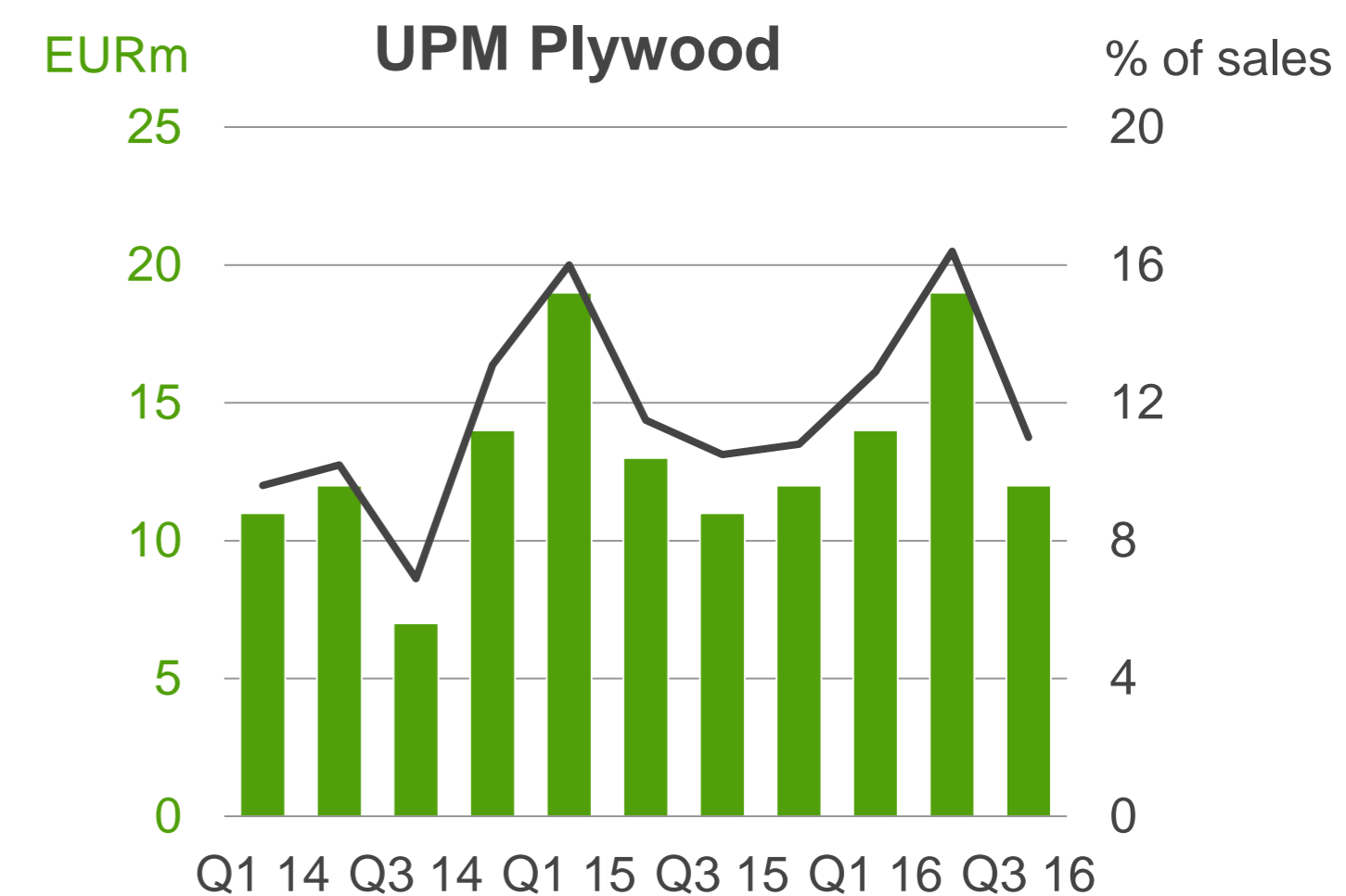
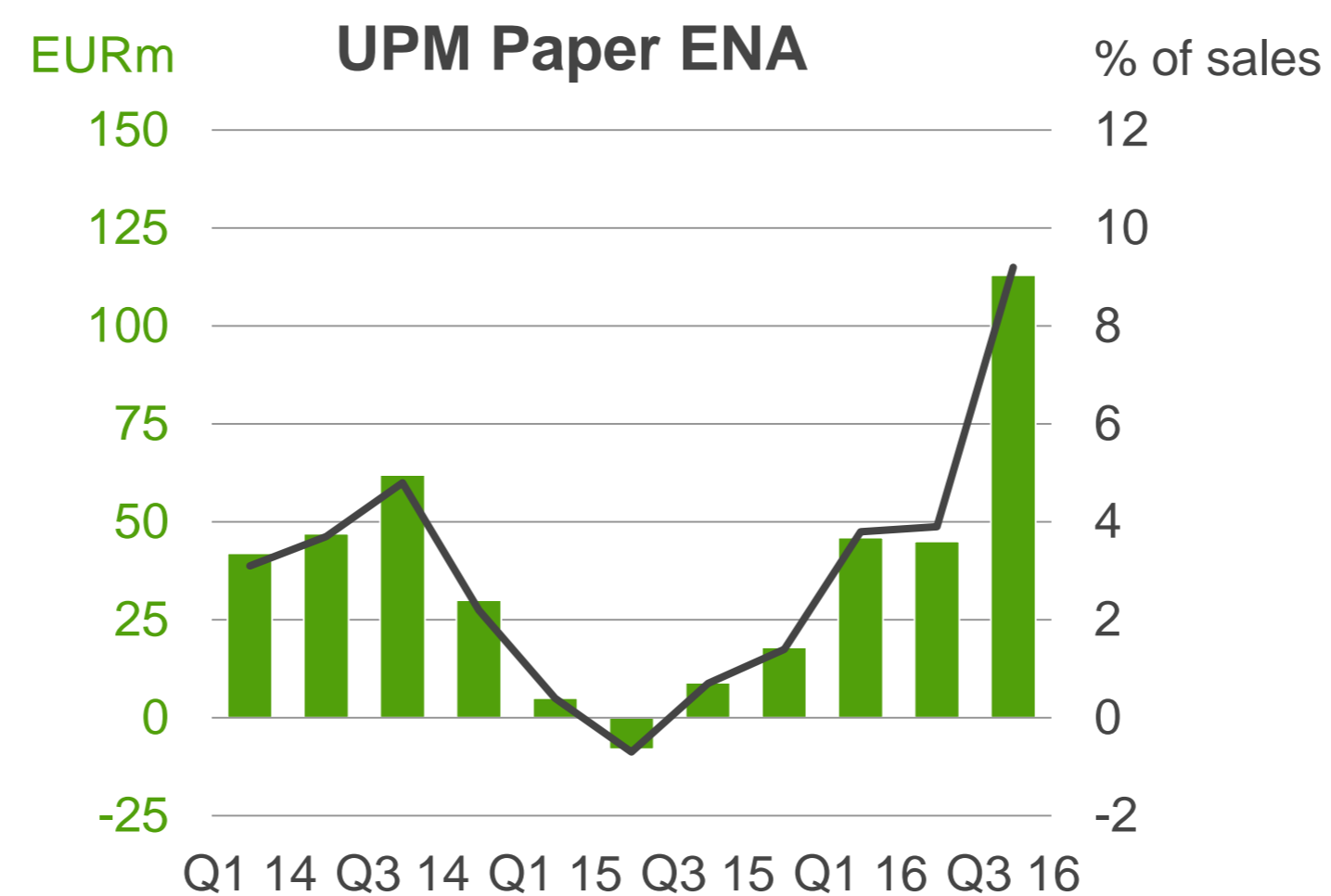
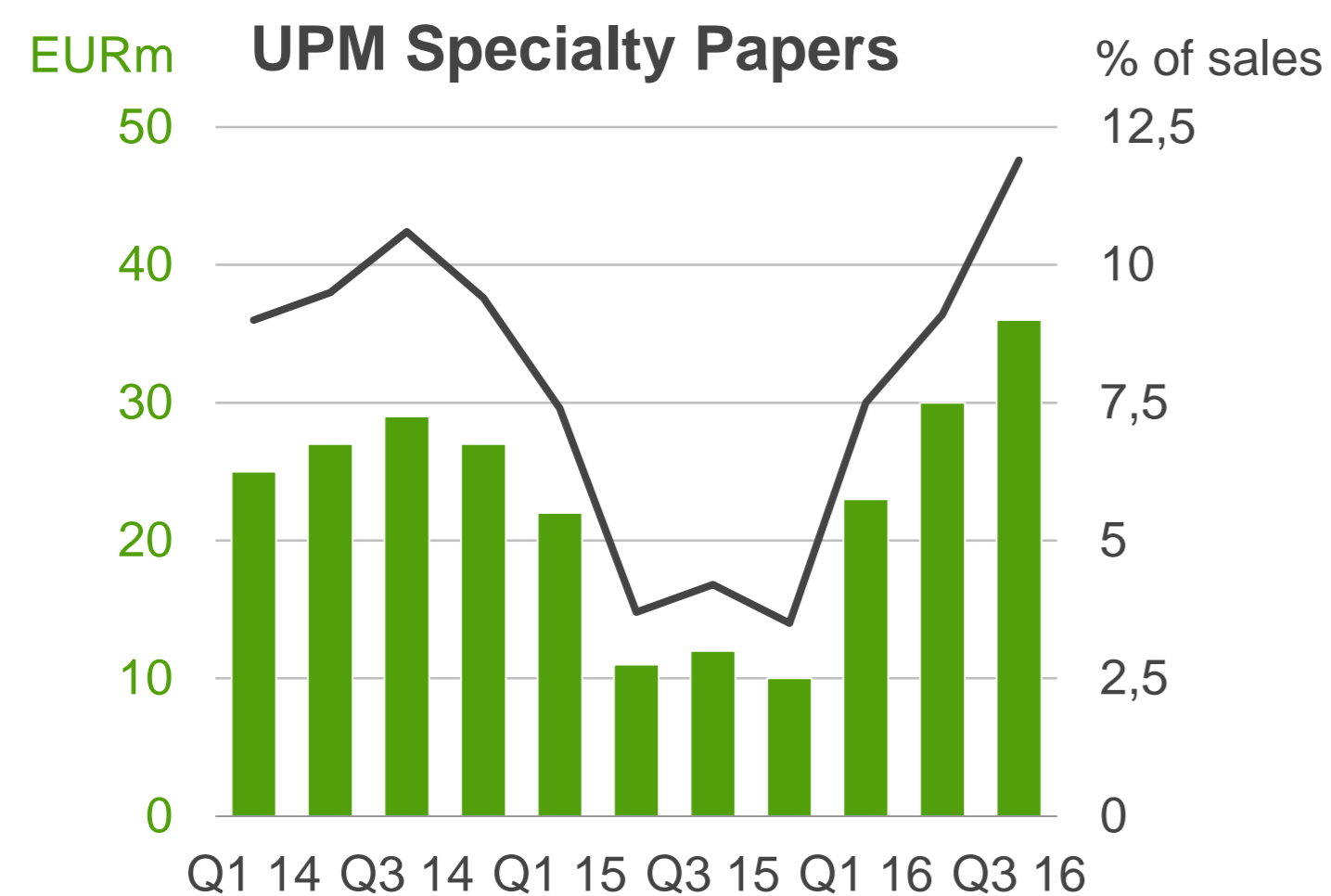
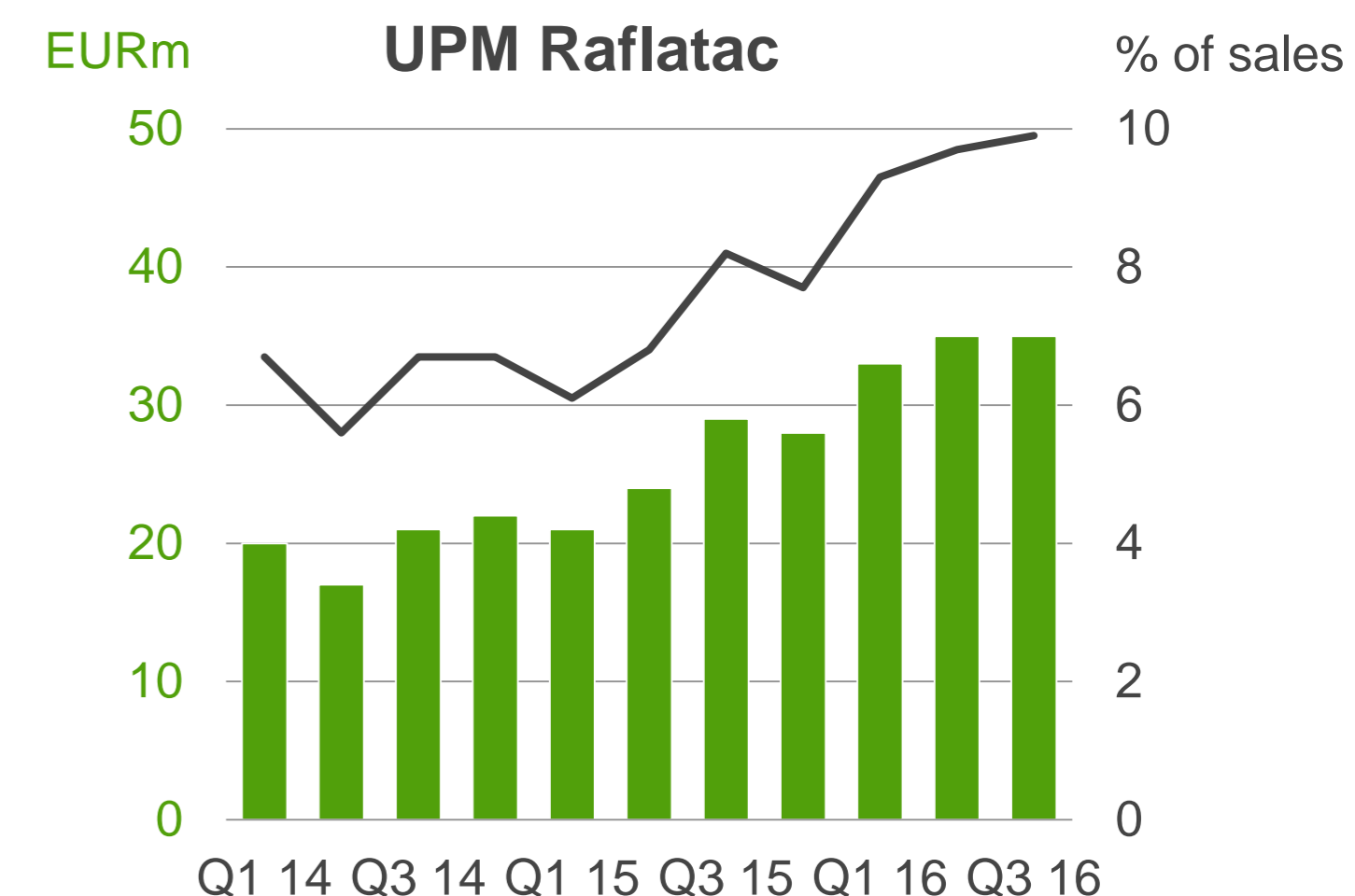
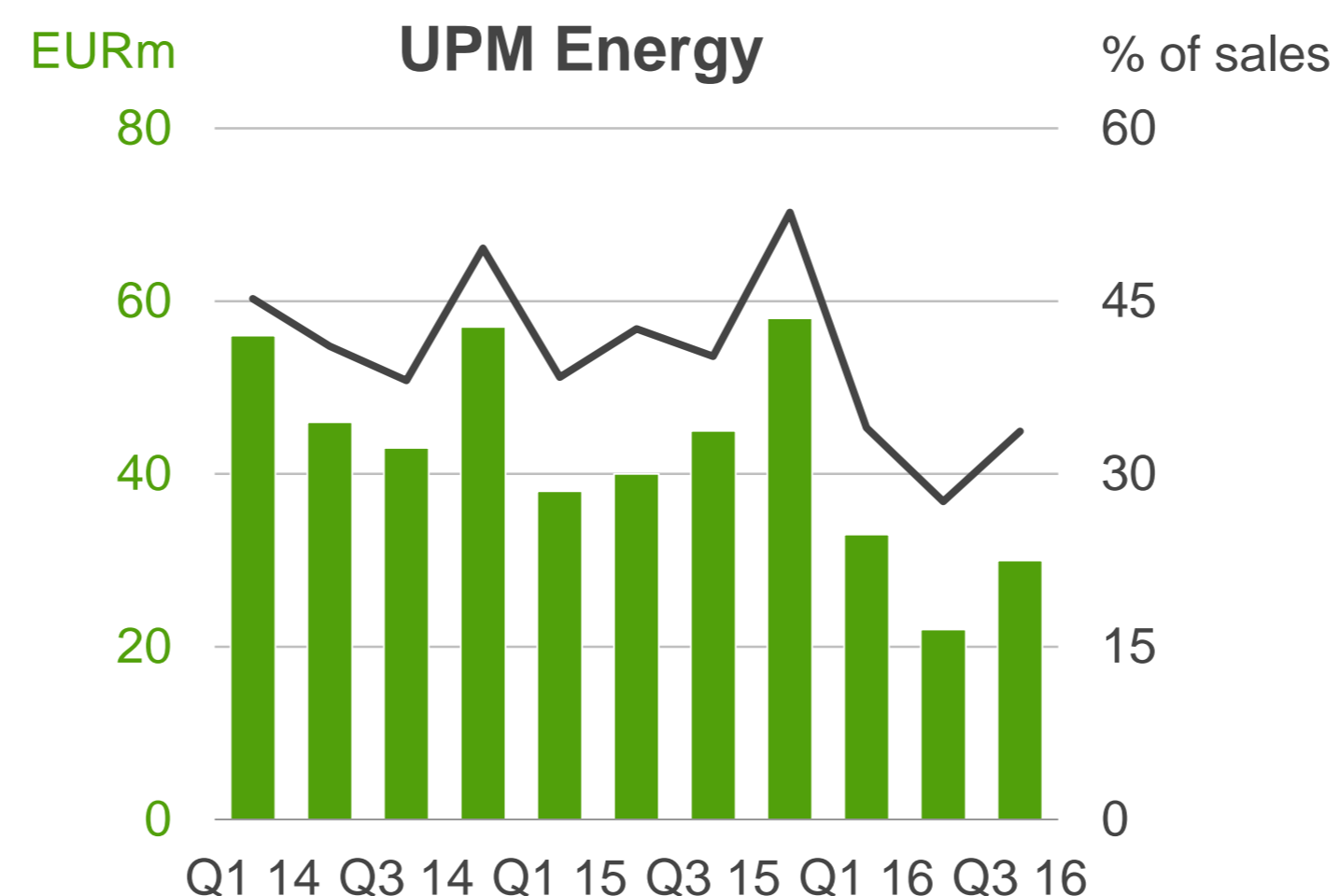
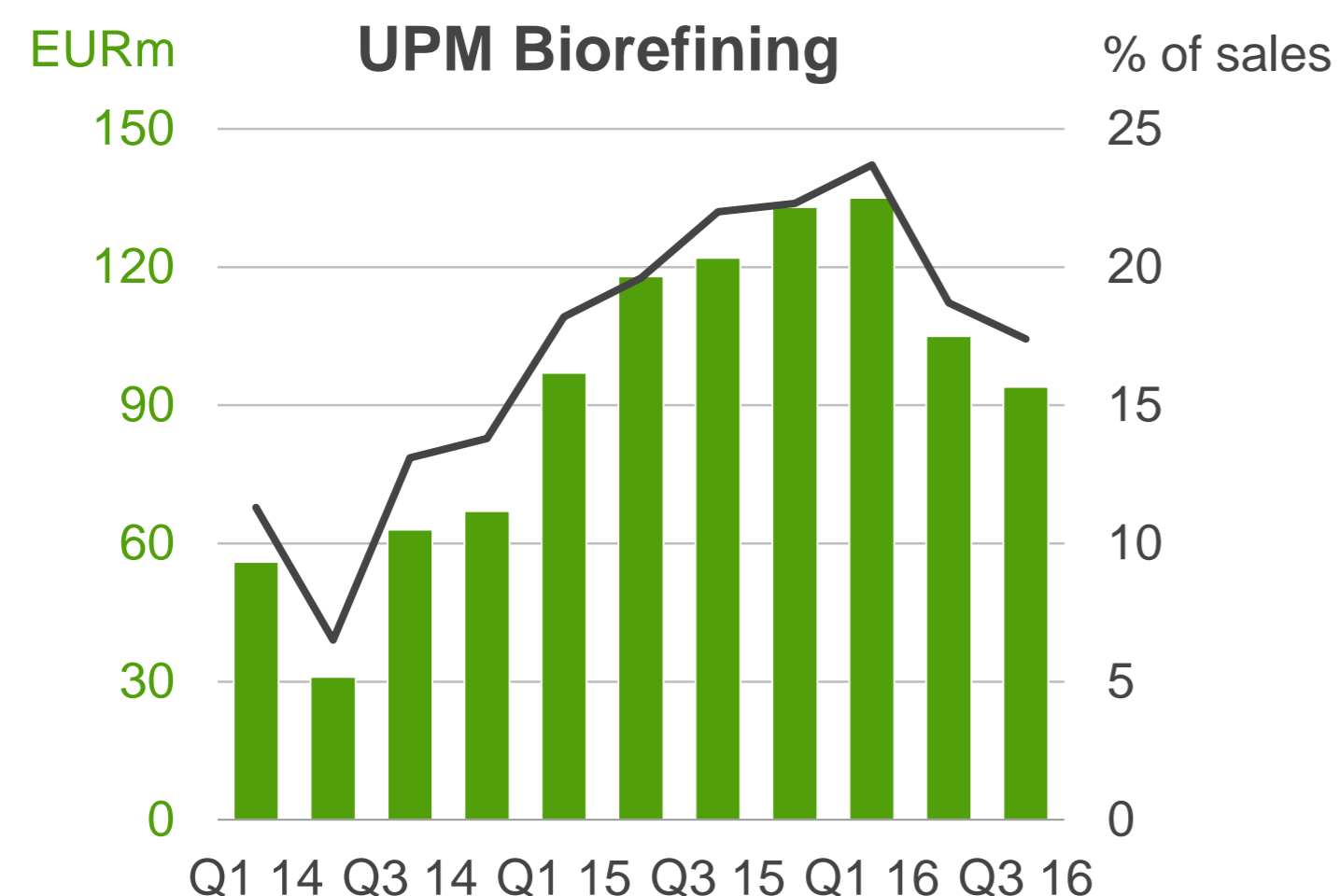
Variable costs
Variable cost / sales



Variable cost measures
Materials efficiency
Energy efficiency
Efficient use of assets



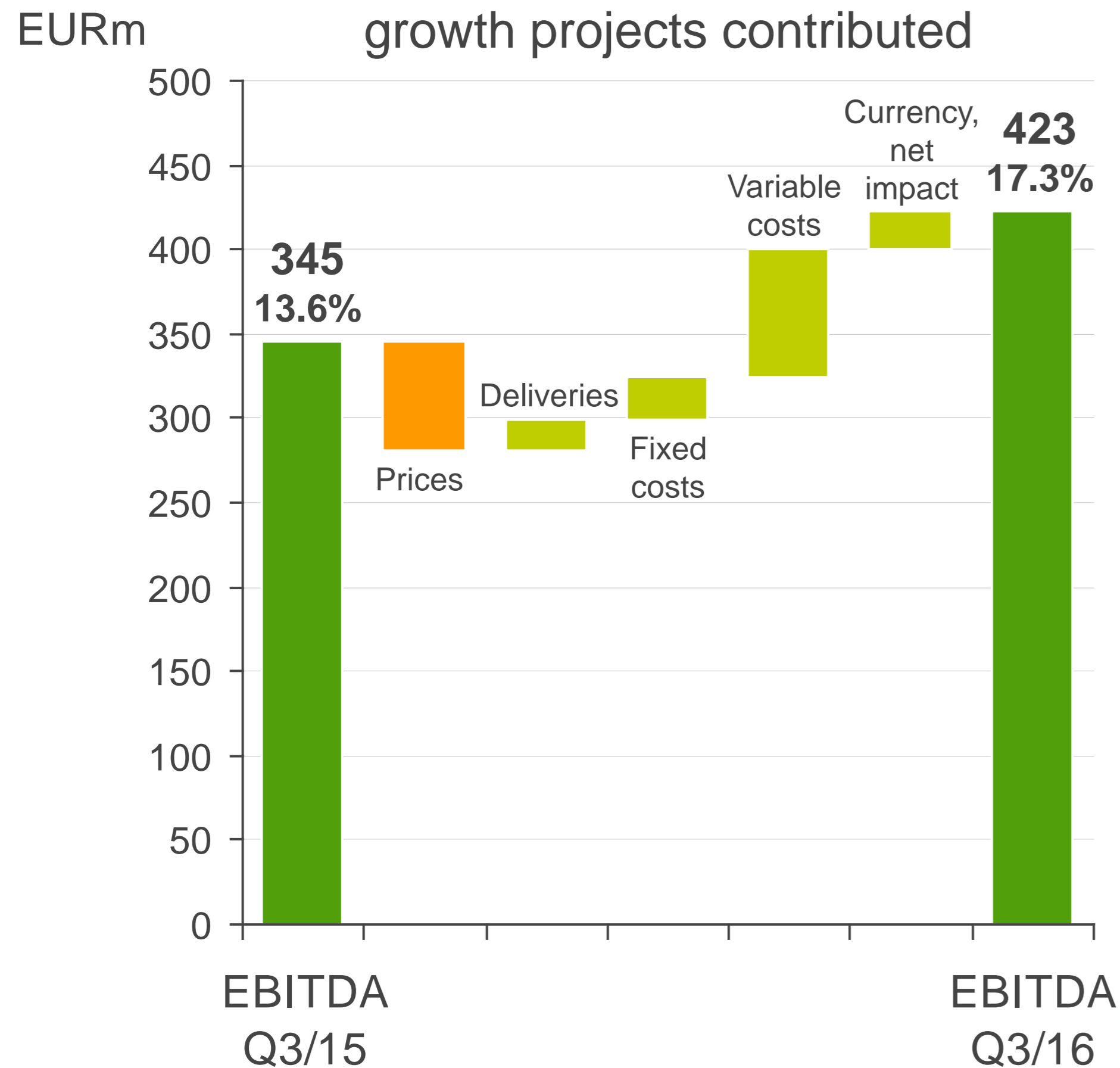
Comparable EBIT by business area



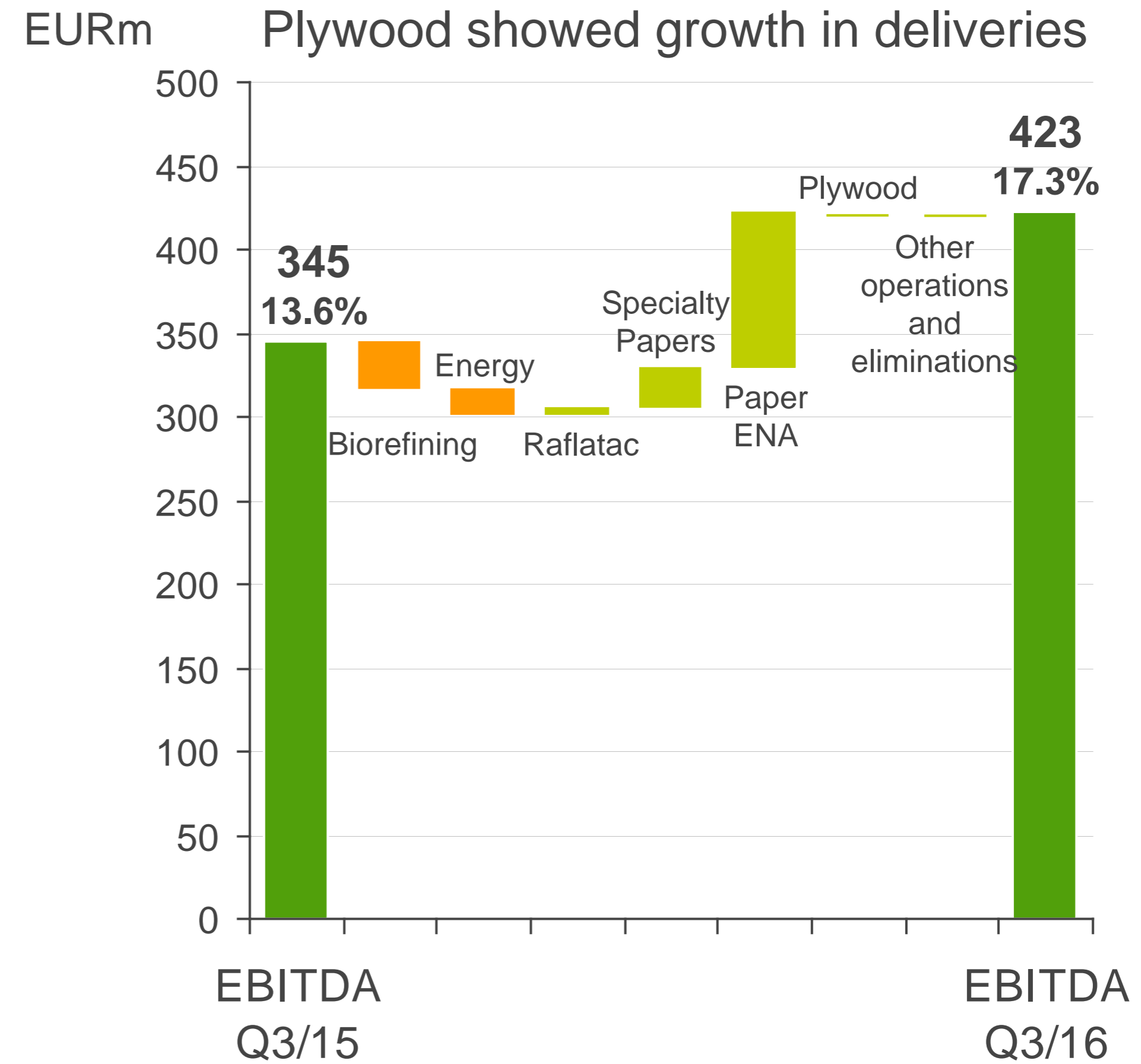


Comparable EBITDA in Q3 2016 vs. Q3 2015

Cost efficiency measures on strong track in a deflationary business environment, growth projects contributed



Cost efficiency improved in all businesses. Biorefining, Raflatac, Specialty Papers and Plywood showed growth in deliveries



Outlook for 2016 is unchanged

- UPM's profitability is expected to improve in both the full year 2016 and H2 2016, compared with last year. Q4 2016 performance is expected to be negatively impacted compared to Q3 2016 by seasonal factors and clearly higher maintenance activity in UPM Biorefining and UPM Paper ENA.
- UPM's growth projects are expected to contribute positively to the company's earnings in 2016, compared with 2015. UPM is continuing its measures to reduce variable and fixed costs in 2016. Currencies are expected to contribute positively as hedges have rolled over.

Responsibility is good business

MORE WITH BIOFORE



Creating value through
products and innovation



Creating competitive advantage
and long-term value by efficiency

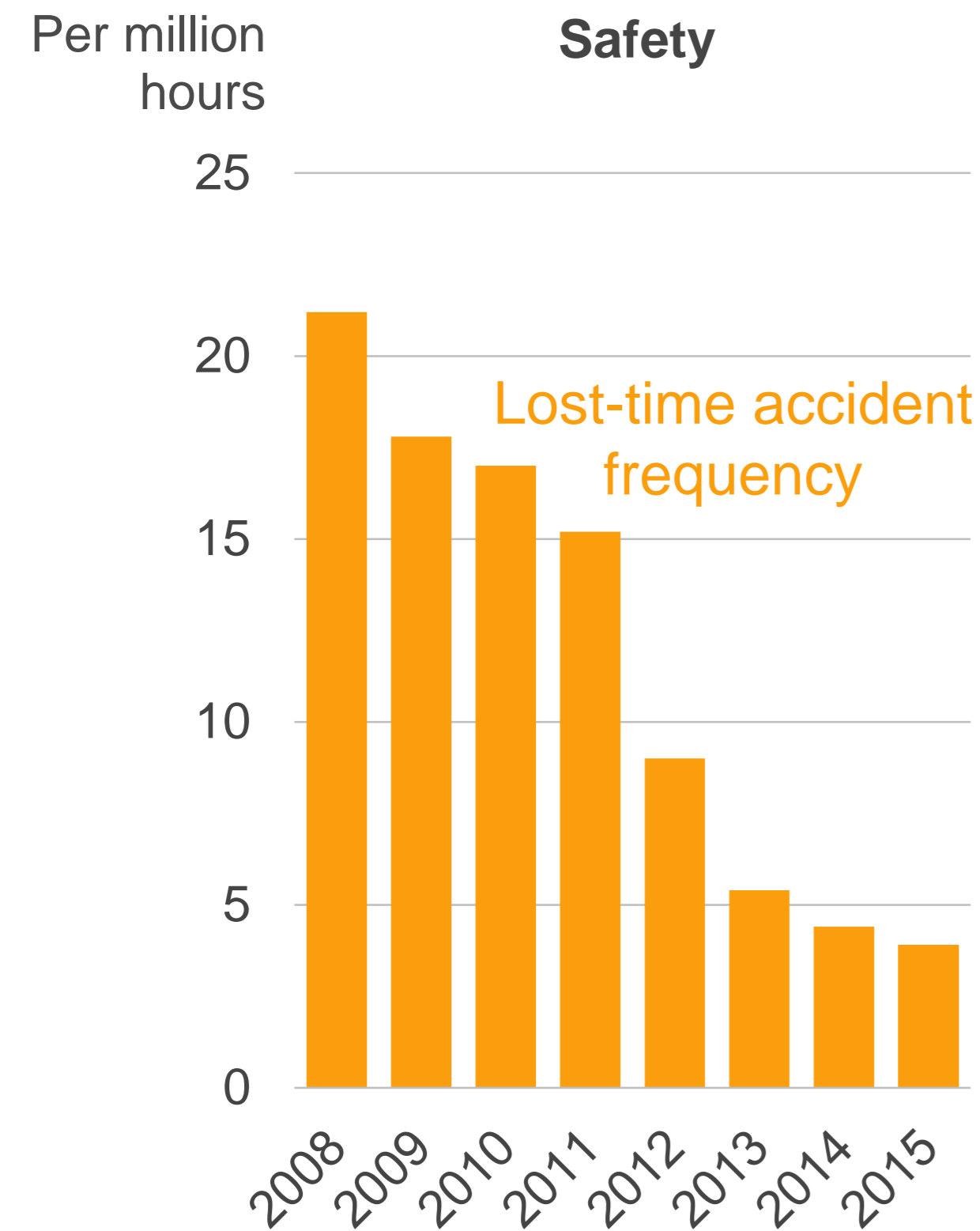
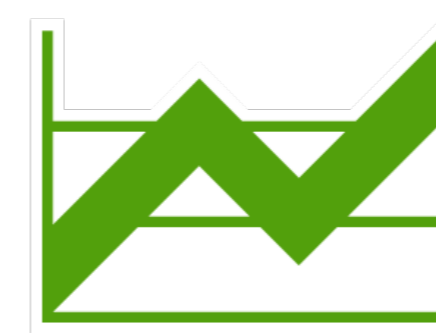


Risk mitigation by responsible
value chain and production

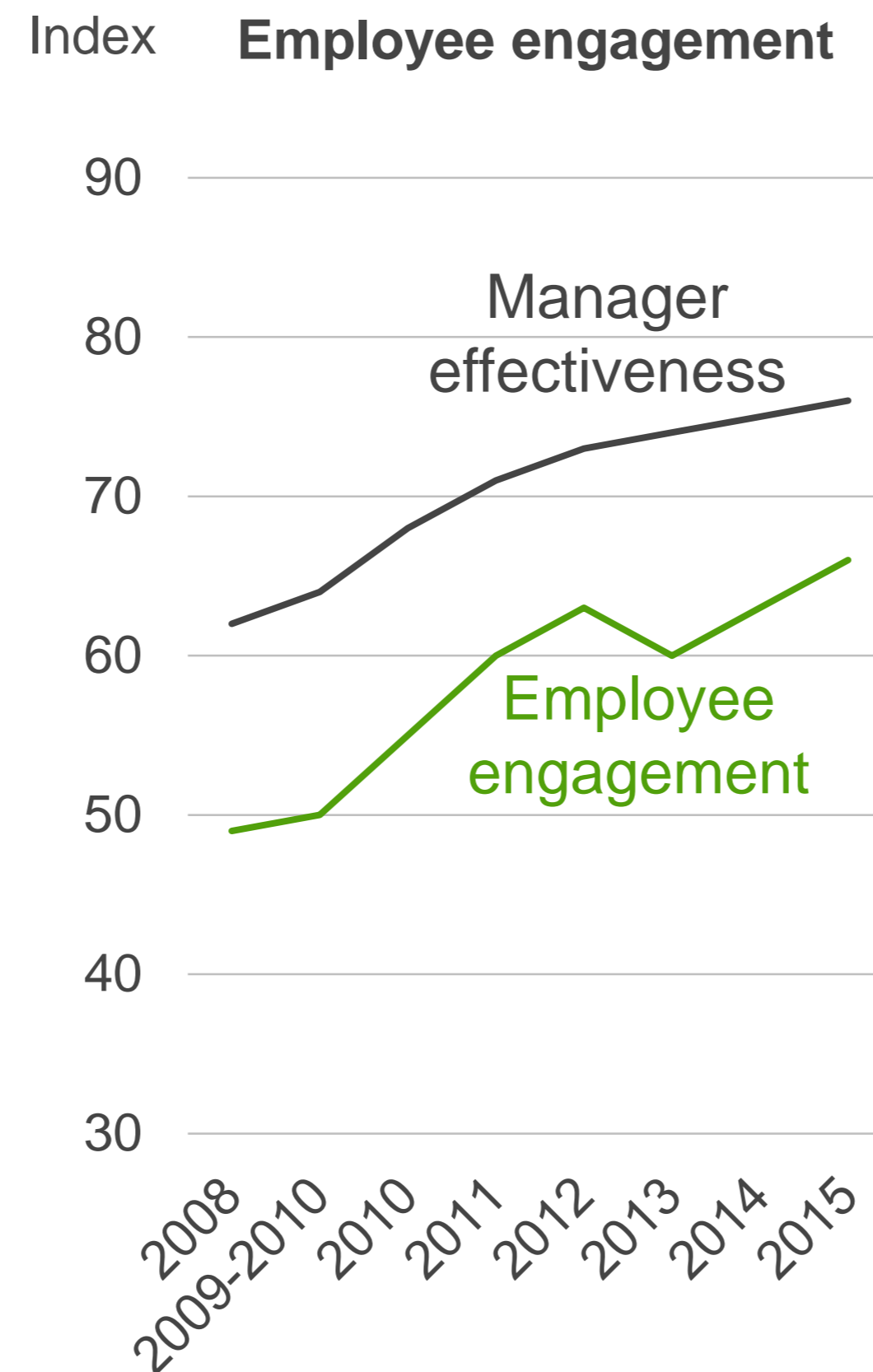
"We believe that
customers, investors
and other stakeholders
value responsible
operations that keep
risks under control and
add to our business
opportunities,
thereby increasing
the company value."

UPM Annual Report 2015

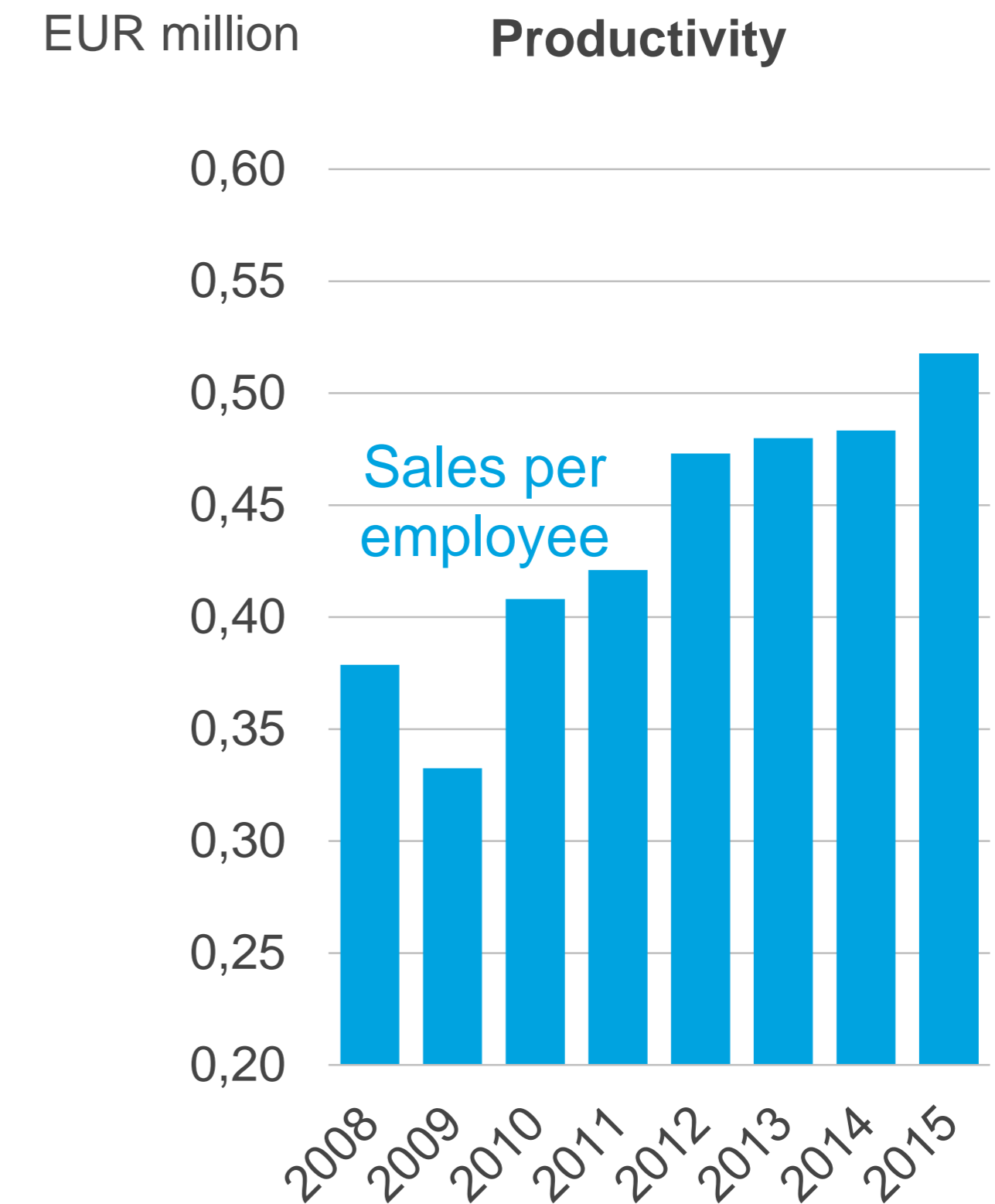
Creating competitive advantage and long-term value by engagement



5-year change:
-77%



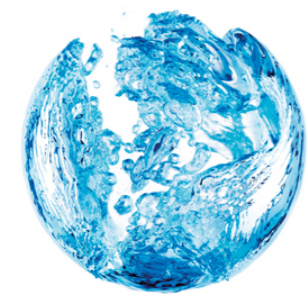
5-year change:
+11



5-year CAGR:
+5%

Creating competitive advantage and long-term value by efficiency

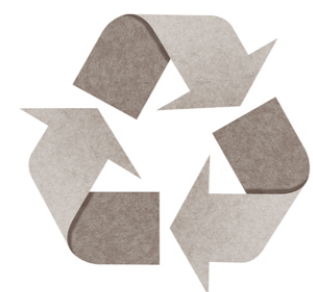
Case: UPM Changshu mill in China



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



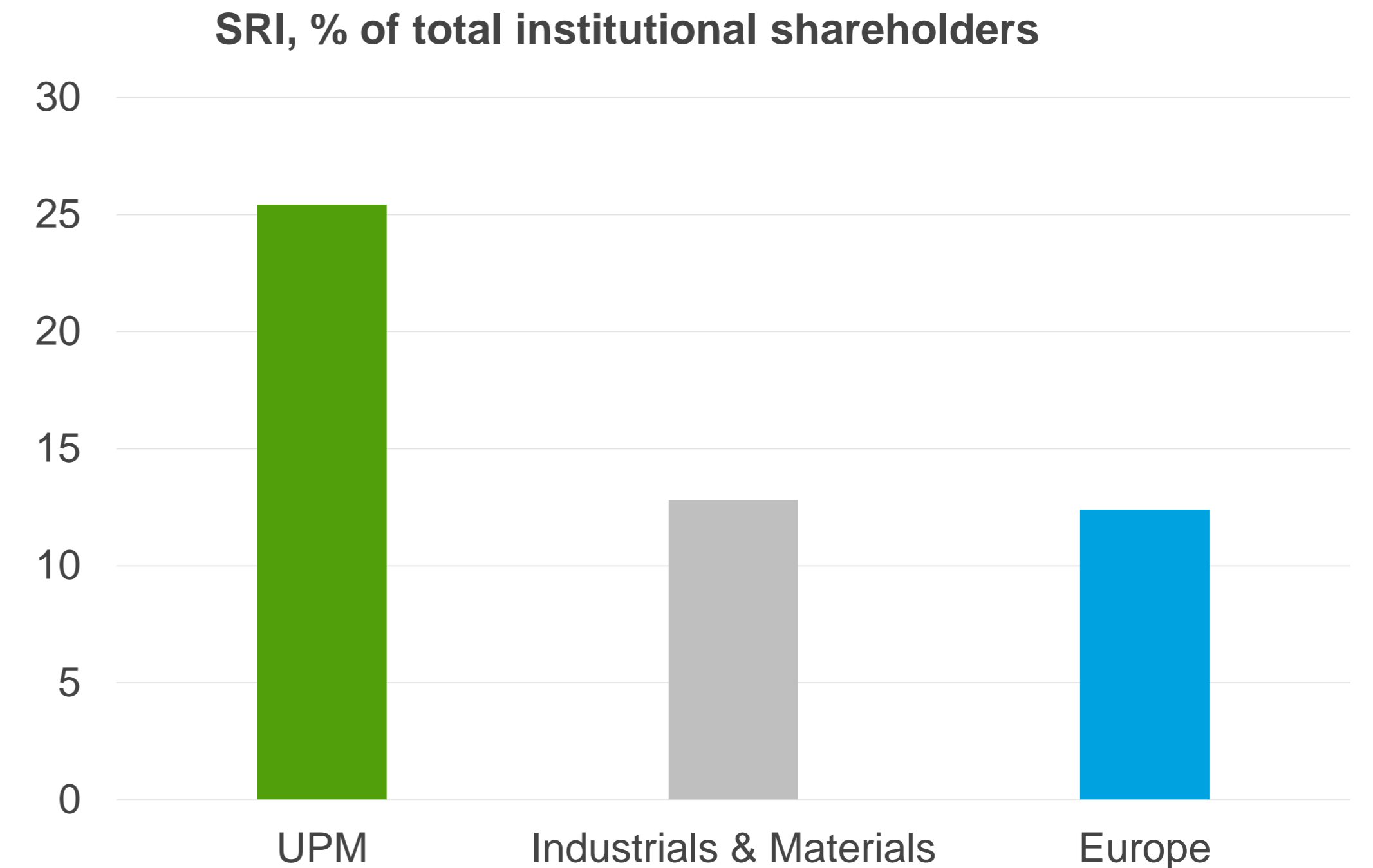
Source: UPM

Consistent long-term work receives external recognition

UPM in sustainability indices



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



Source: Nasdaq, October 2015

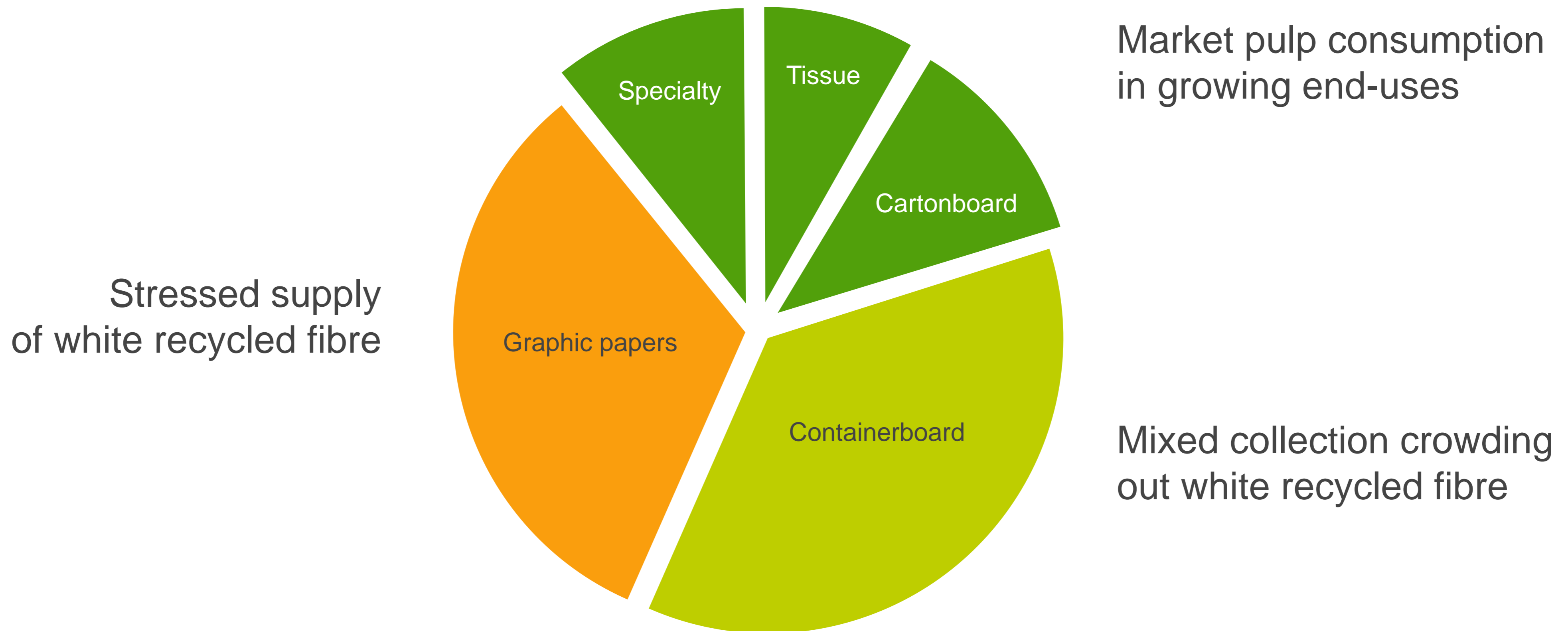
UPM Biorefining

Pulp is used in products we all use daily

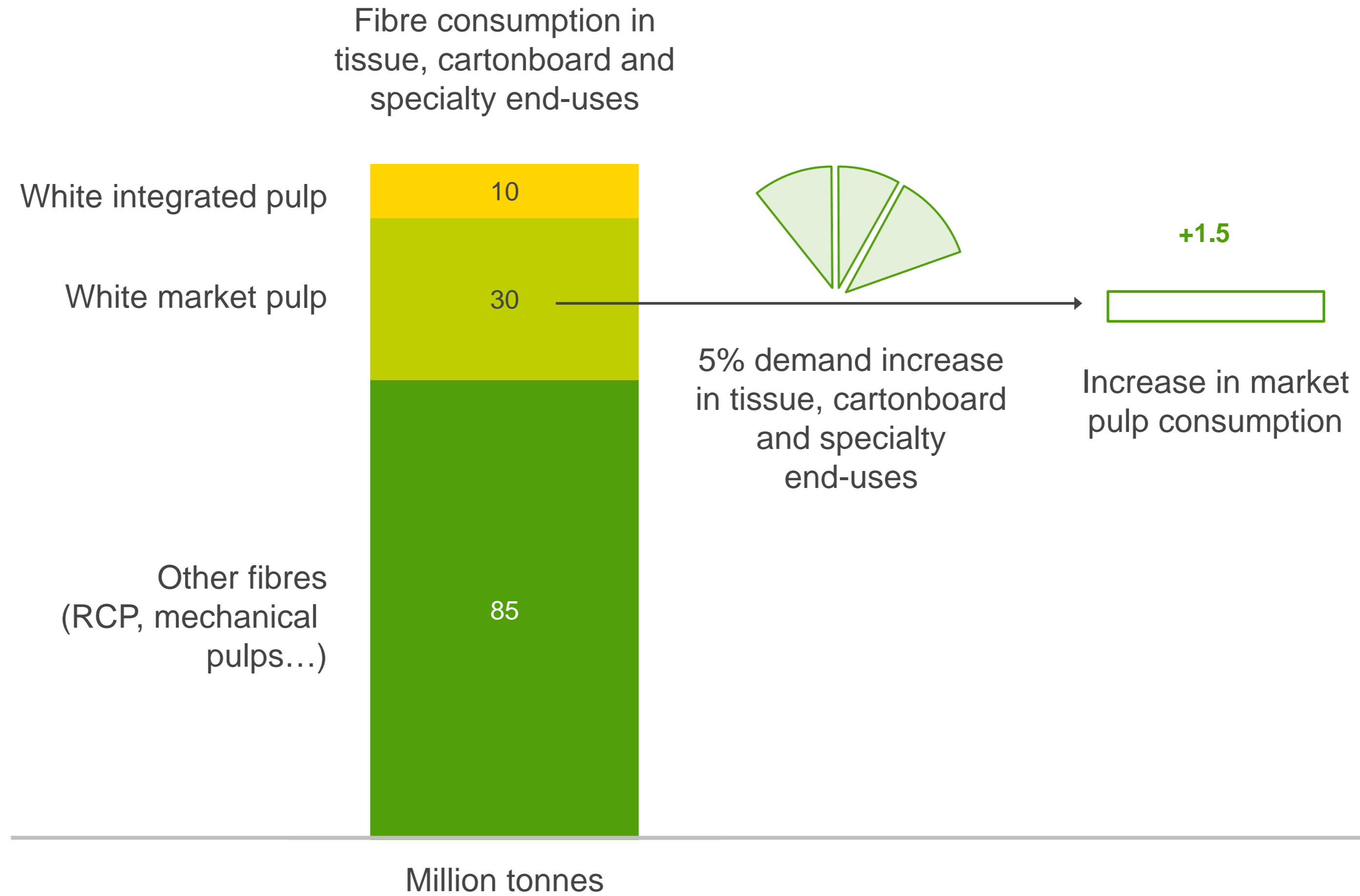


Market pulp consumed in growing end-uses – supply of alternative white fibres declines

Global paper and board production

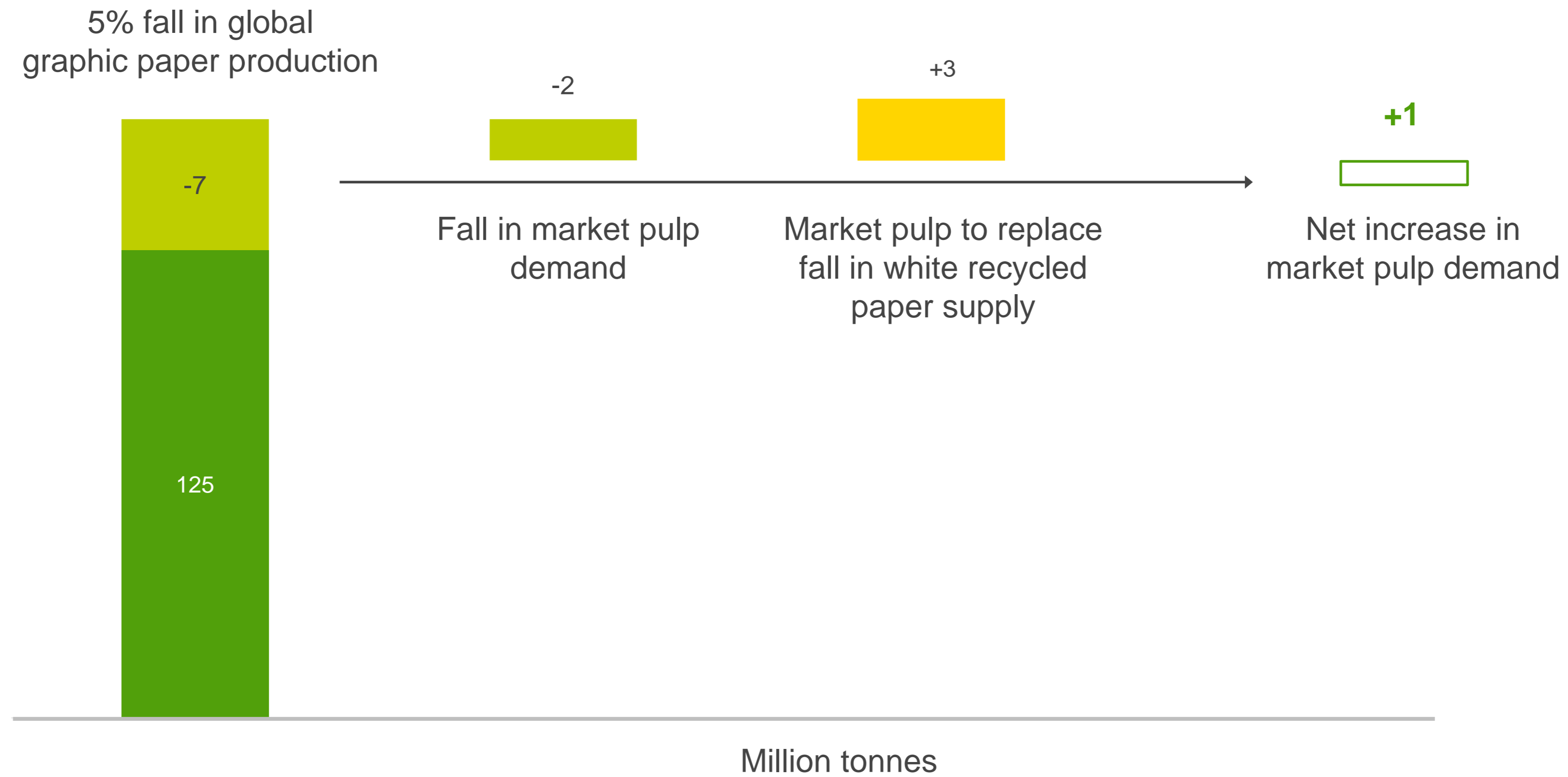


Case: Market pulp consumption in growing end-uses



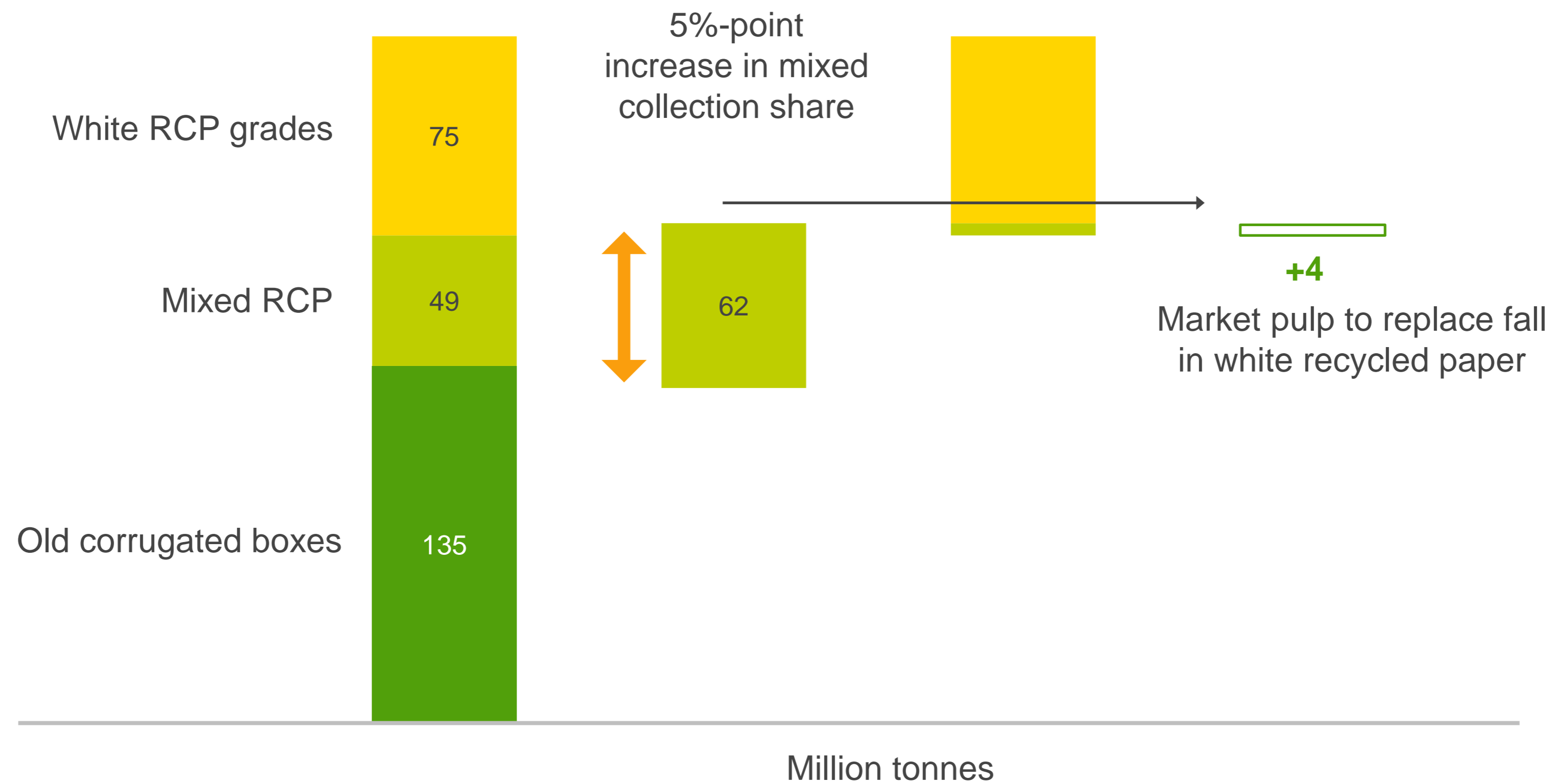
Source: Pöyry, Hawkins Wright, UPM

Case: Stressed supply of white recycled paper



Source: Pöyry, UPM

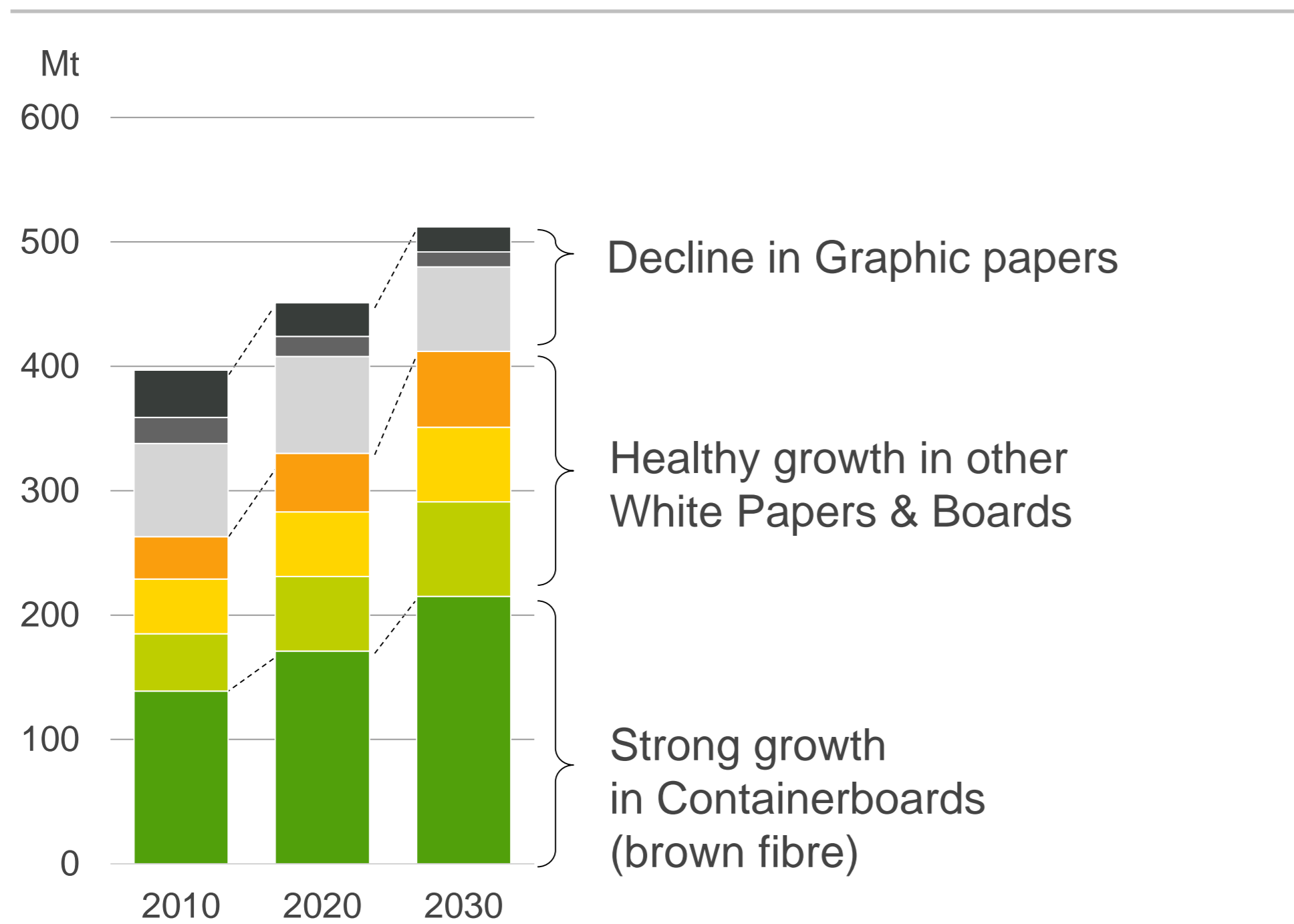
Case: Mixed collection crowding out white recycled fibre



Source: Pöyry, UPM

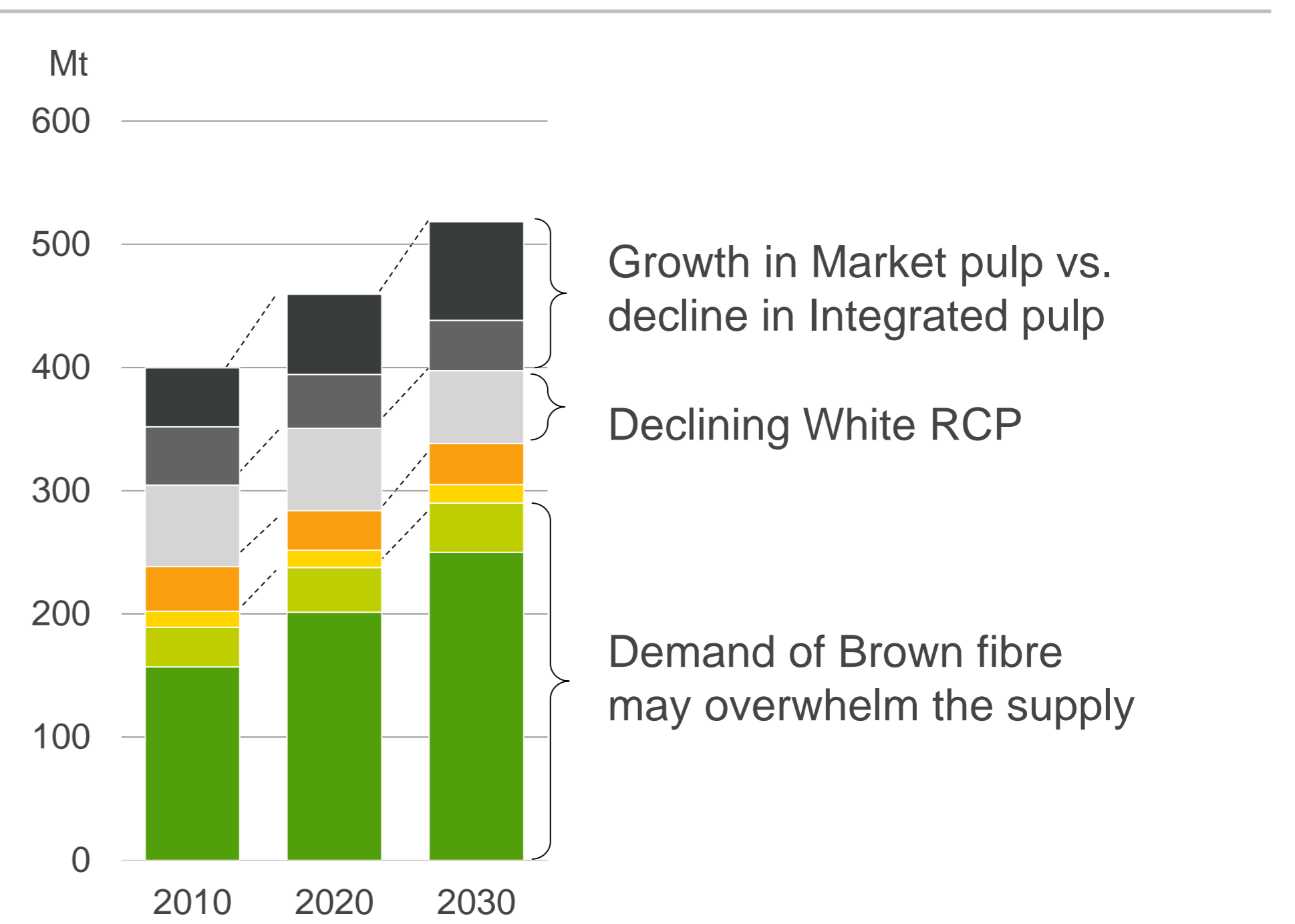
Summary of pulp demand outlook

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)

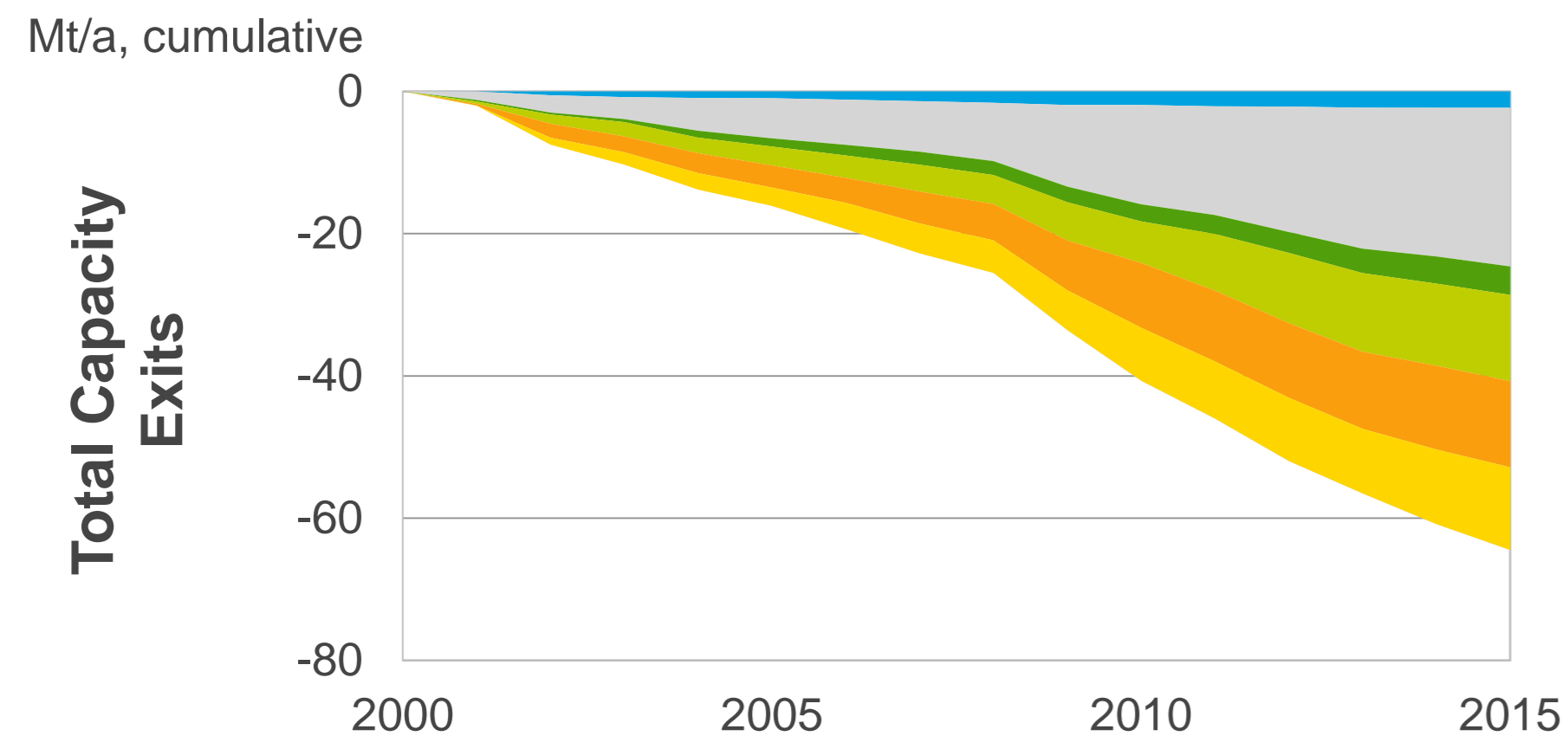
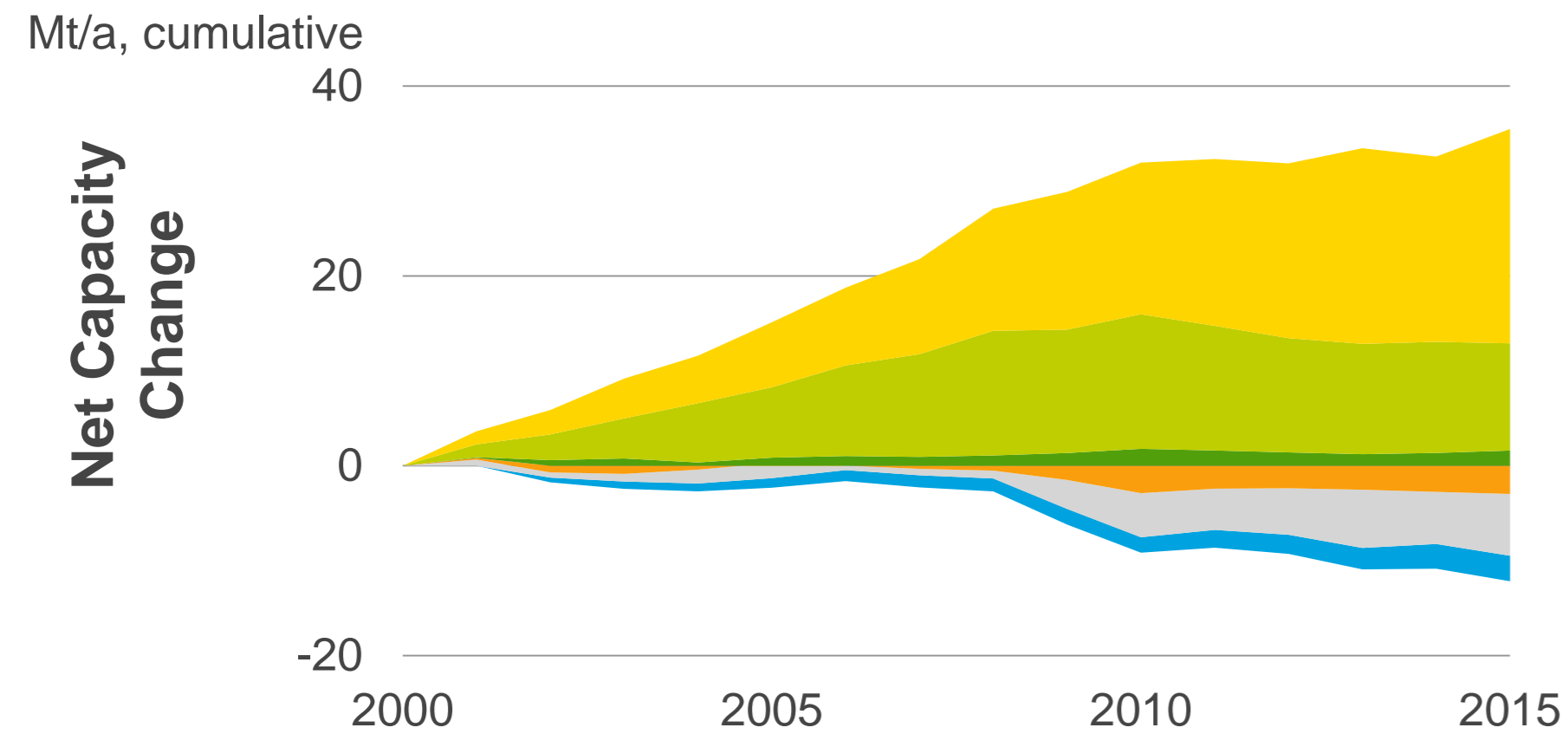
... will drive fibre demand in coming decades



- 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



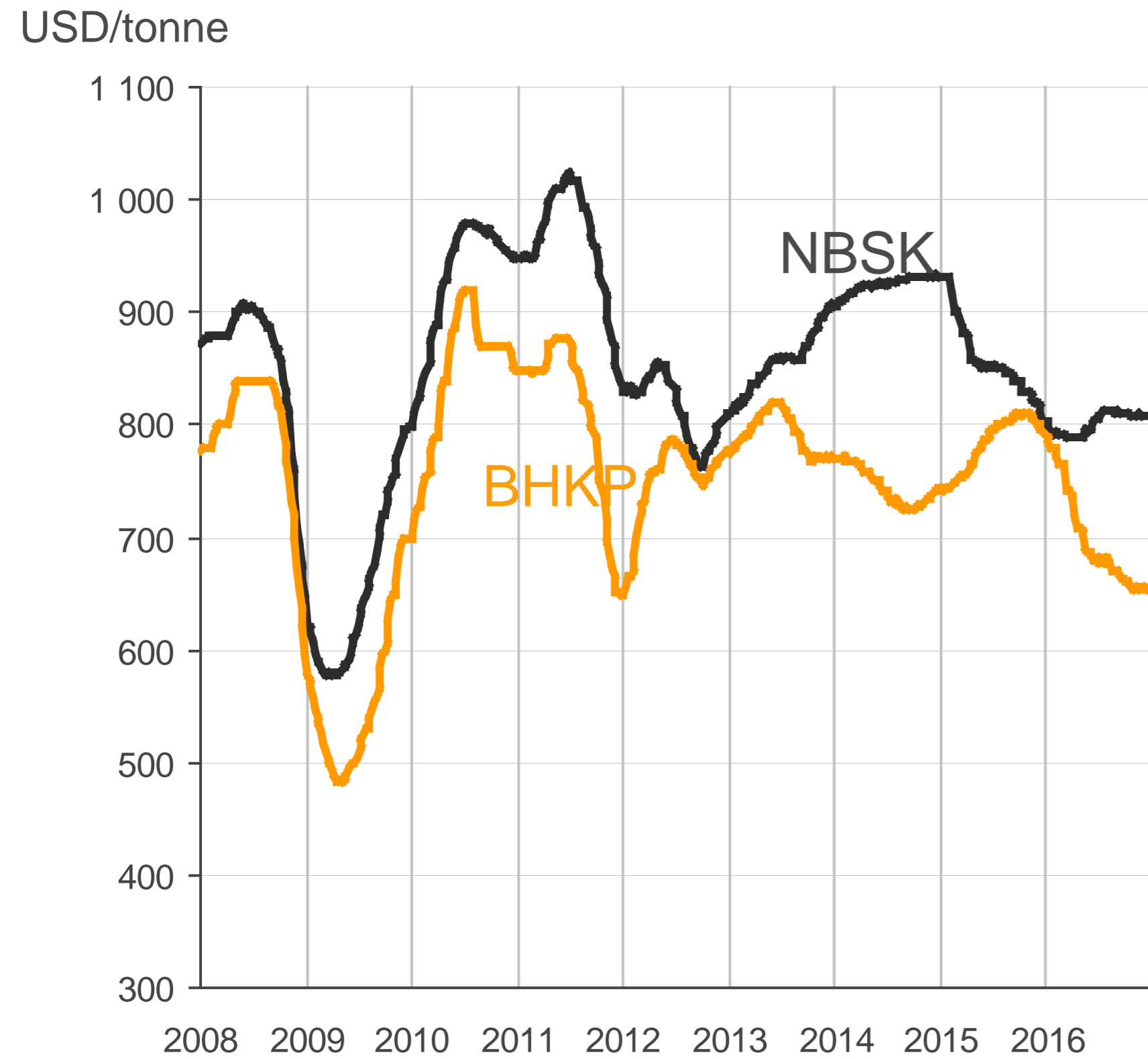
- **Hardwood pulp** capacity has experienced strong net growth after 2000 and is expected to continue growing.
- **Softwood** has faced closures as much as hardwood. New demand in China is turning decline into a slow growth.
- **White RCP** was the fastest-growing fibre in Europe and NA in early 1990's.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

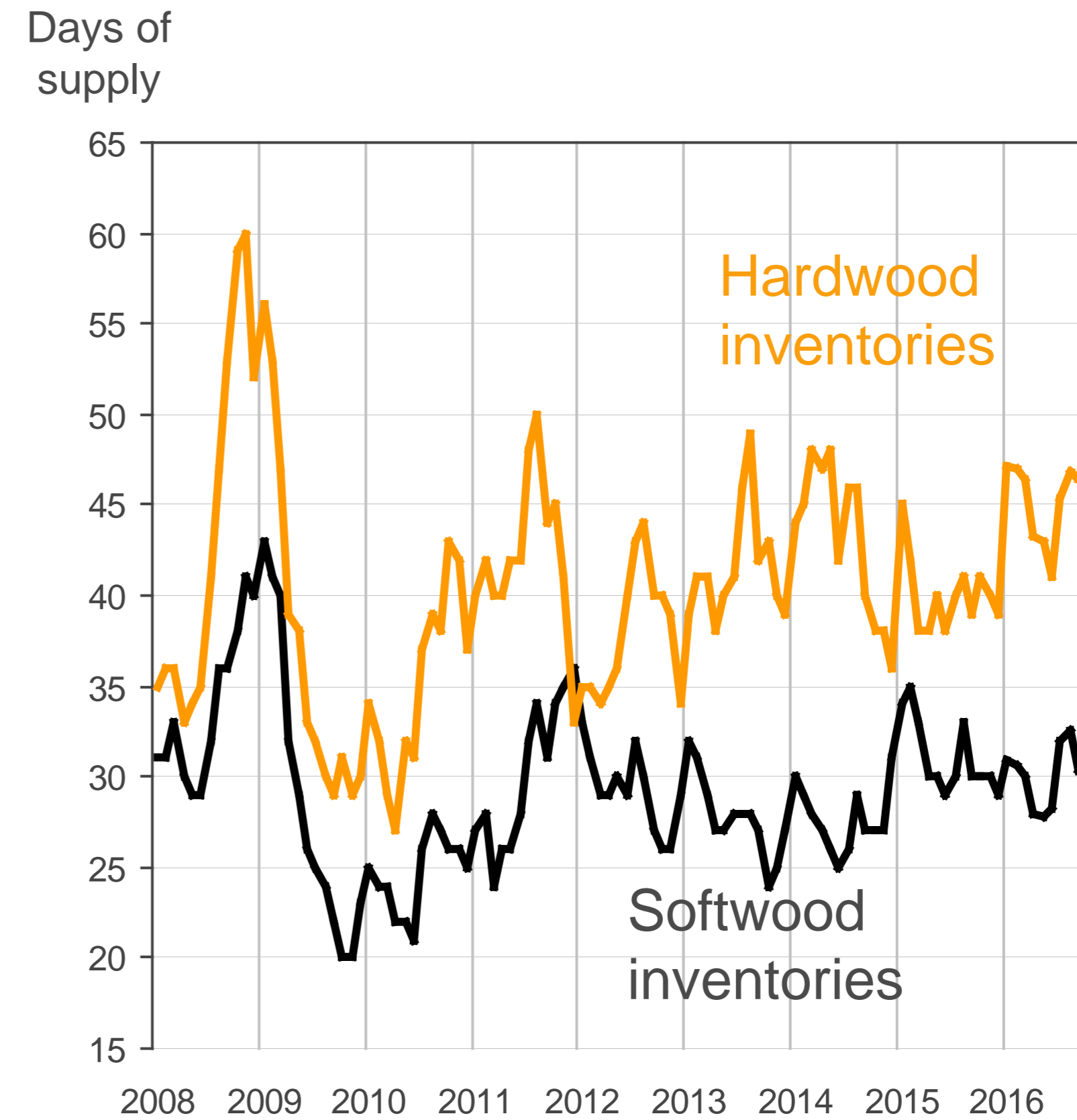
Chemical pulp market

Q3 NBSK pulp price increased 2% from Q2
 Q3 BHKP pulp price decreased 3% from Q2



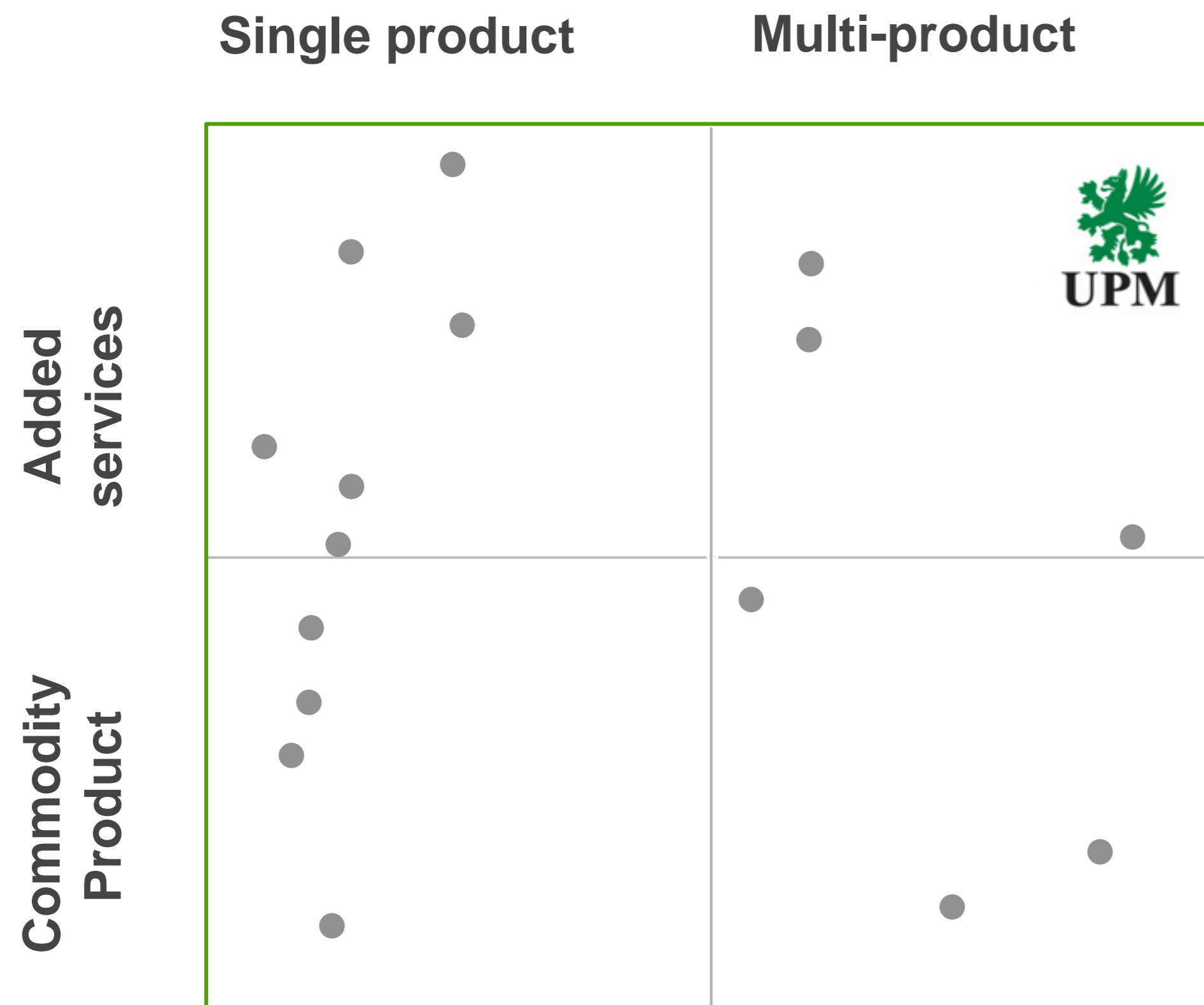
Source: FOEX Indexes Ltd.

Pulp inventories



Source: PPPC World-20 statistics

UPM Pulp's commercial strategy is based on multi-fibre product strategy and technical support



Source: UPM

- Broad pulp grade offering combined with technical service strengthens UPM's customer relations and enhances regular business
- UPM is large in specialty end-use segments where quality, product range and technical support matters the most
- Trusted business partner with own sales and marketing network, advanced technical service offering and outstanding environmental performance as well as stable quality pulp
- Modern and cost efficient assets, committed to grow with the customers

Sustainability and environmental performance are increasingly important differentiators

Performance of wood supply & mill operations



* Including certificates, eco-labels, footprint analyses etc.

Source: UPM

Sustainability principles for UPM pulp

Wood supply

- Legal and certified
- Biodiversity integrated in operations
- Net positive environmental gain

Mill operations

- BAT and continuous improvement
- Eco-label criteria fulfilled

Stakeholders

- Active dialogue and engagement of local, national and international stakeholders

Proof

- Verified for internationally recognized eco-label
- Footprint analysis; carbon, water
- Recognized in Dow Jones sustainability index

UPM Biorefining

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

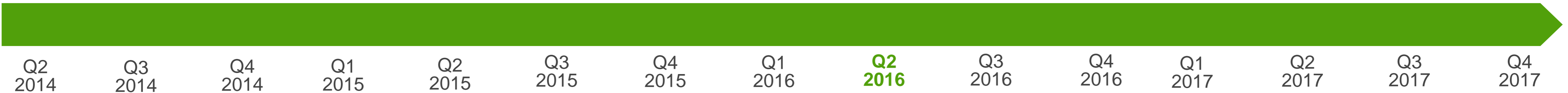
Pietarsaari
pulp mill expansion
70,000t



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



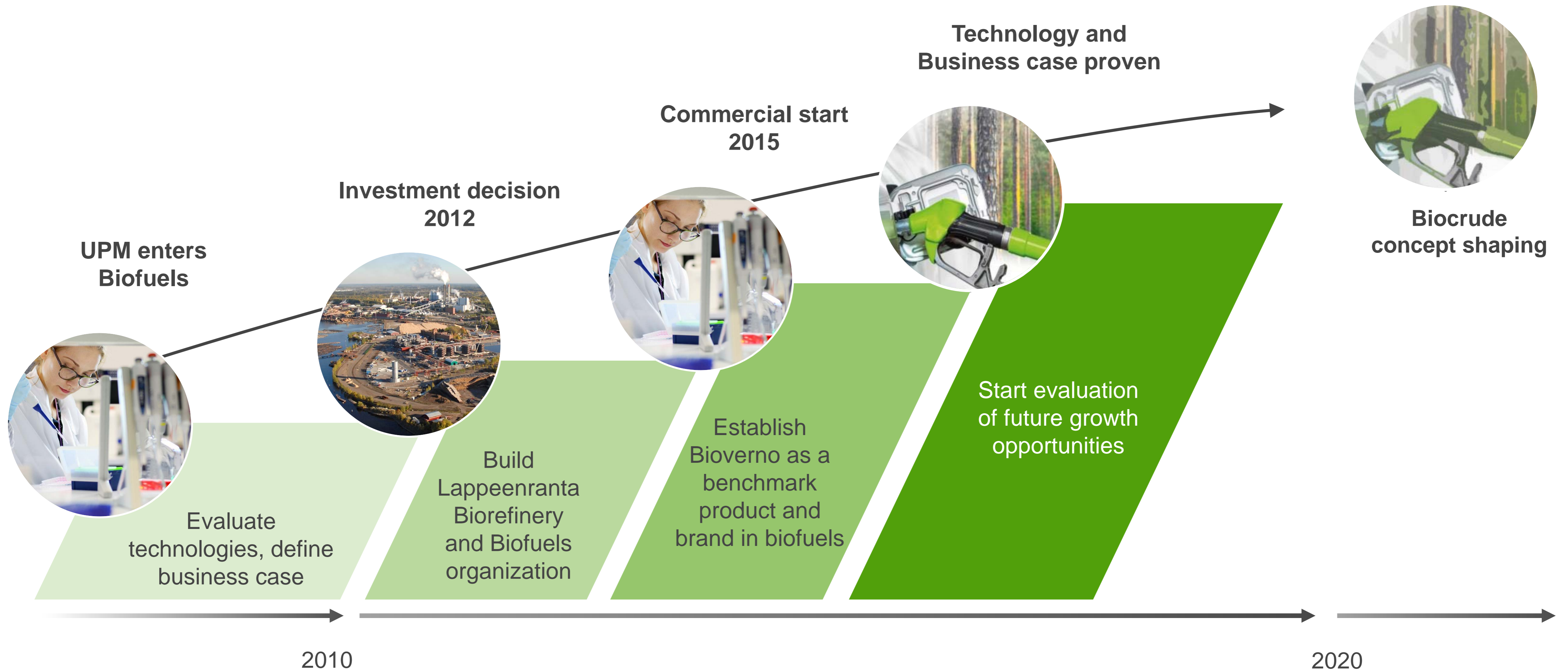
 Dedicated green fleets



  Marine/Aviation

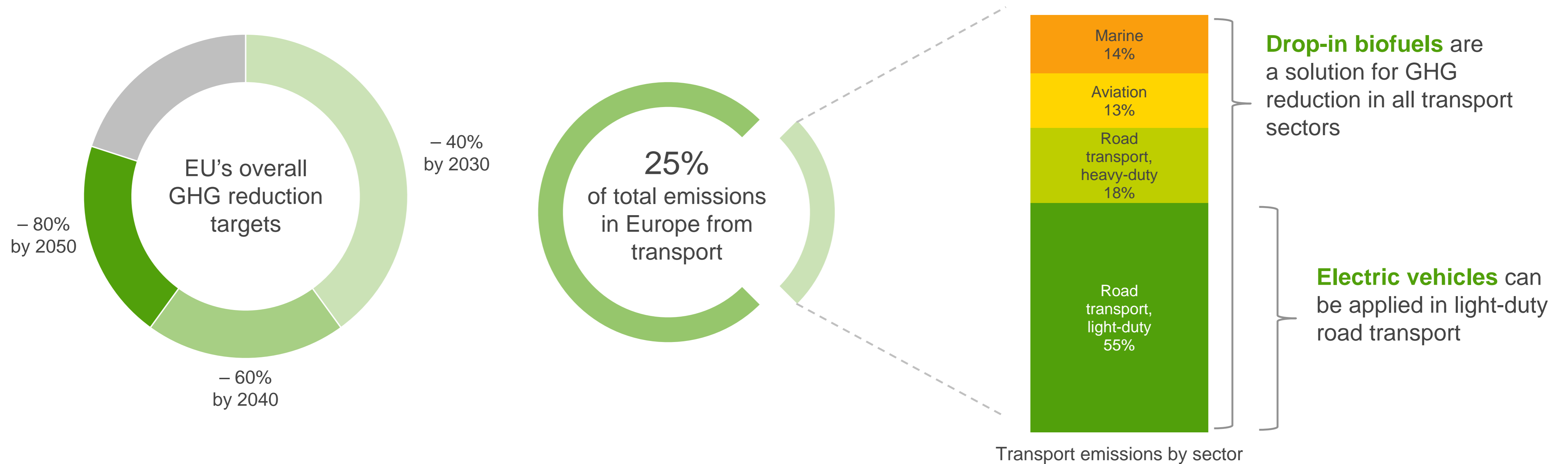


UPM Biofuels business evolving



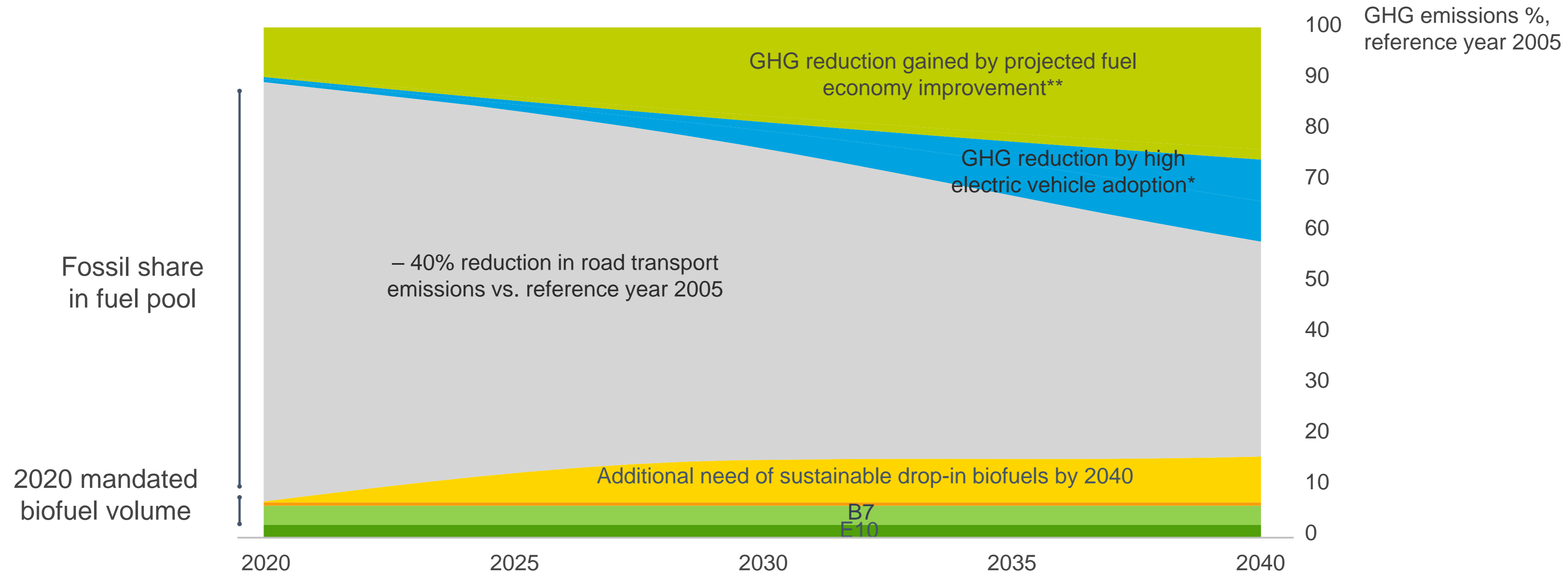
Significant emission cuts needed in transportation sector

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



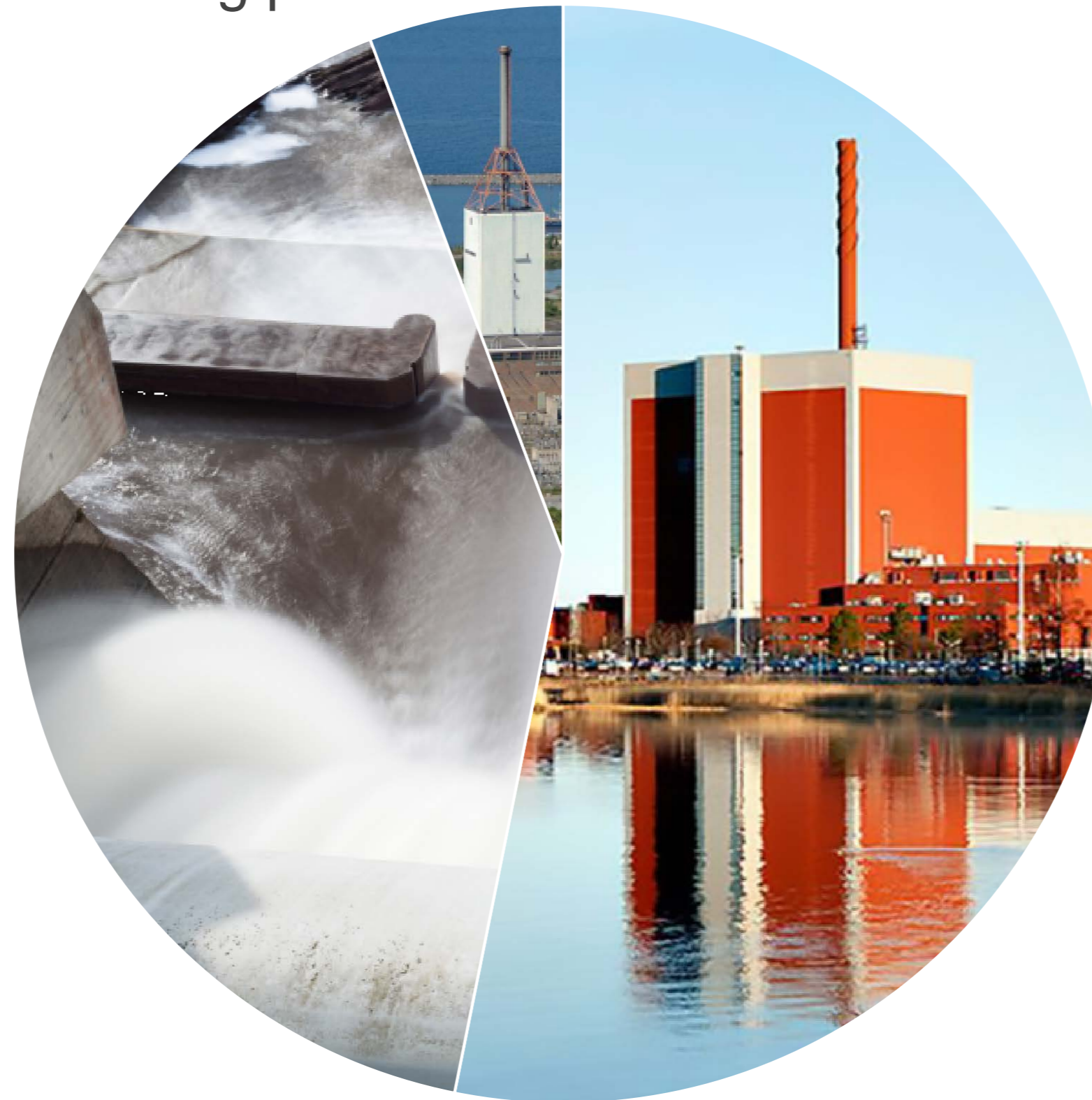
* Calculated based on "Global EV sales outlook to 2040" by Bloomberg New Energy Finance
 * Assuming EV's represent 38% of new car sales in Europe by 2040 + EV's are fully emission free
 ** Assuming annual energy efficiency improvement of 2% in light-duty, 0,5% in heavy-duty

Cost competitive and flexible asset base

Power generation breakdown 2015

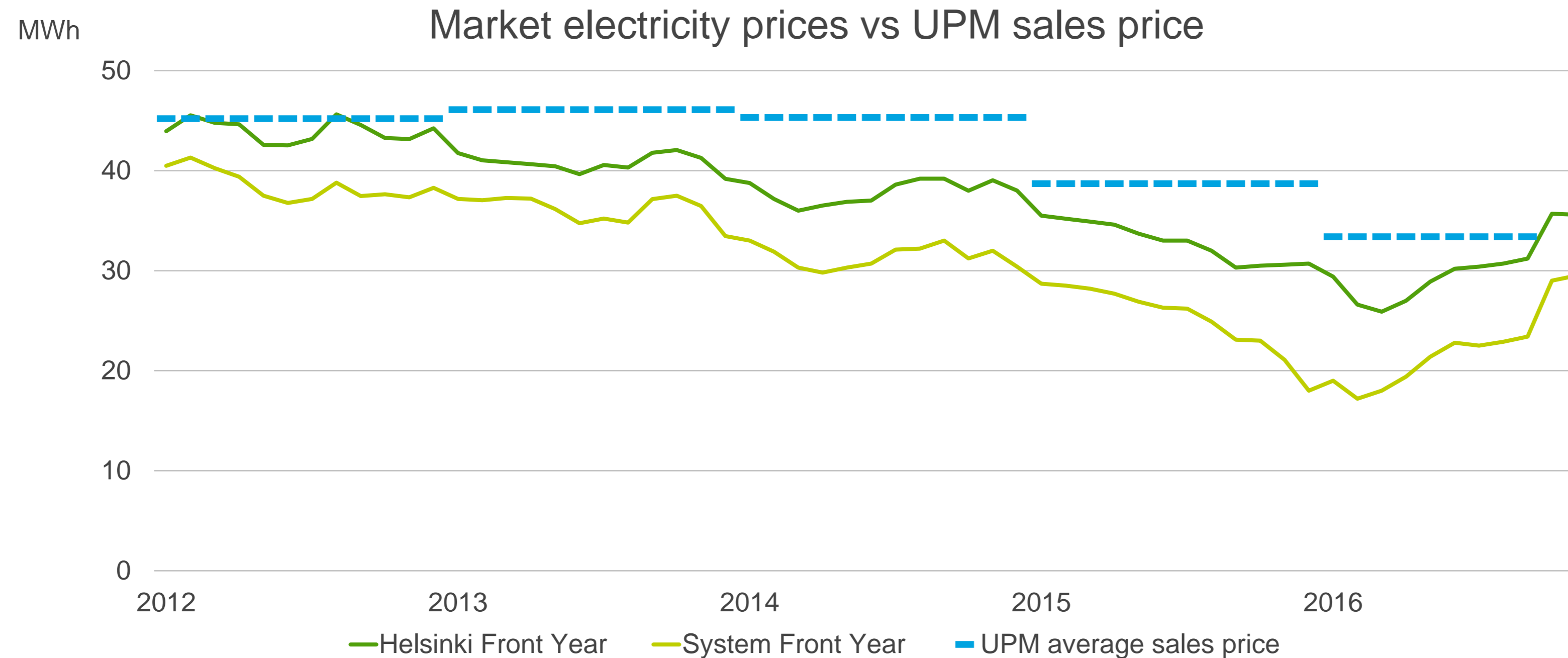
Condensing power

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	9M 2016
Comparable EBIT, EURm	217	186	202	181	85
% of sales	45.0	39.9	43.5	43.6	32.0

UPM Raflatac

Self-adhesive labels in end-use



Leading position in a growing market

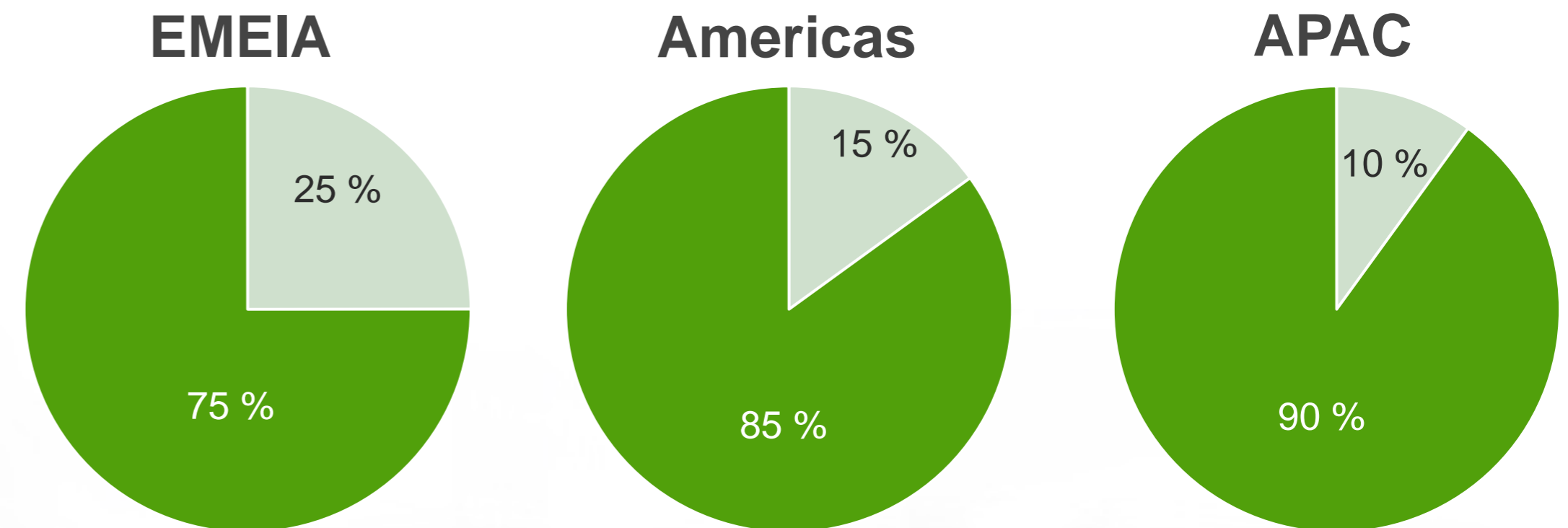
The self adhesive labelstock market

- > 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



Versatile growth drivers in both developed and developing markets

Brands & product innovations

- Constant drive to attract consumers

Legislation

- Increased mandatory information

Technology

- Self adhesive gaining share, E-commerce

Population growth

- Total consumption growth

Higher standard of living

- Expanding middle class

Urbanisation

- Rapid development of retail, packaged foods & goods growth



Continuing growth

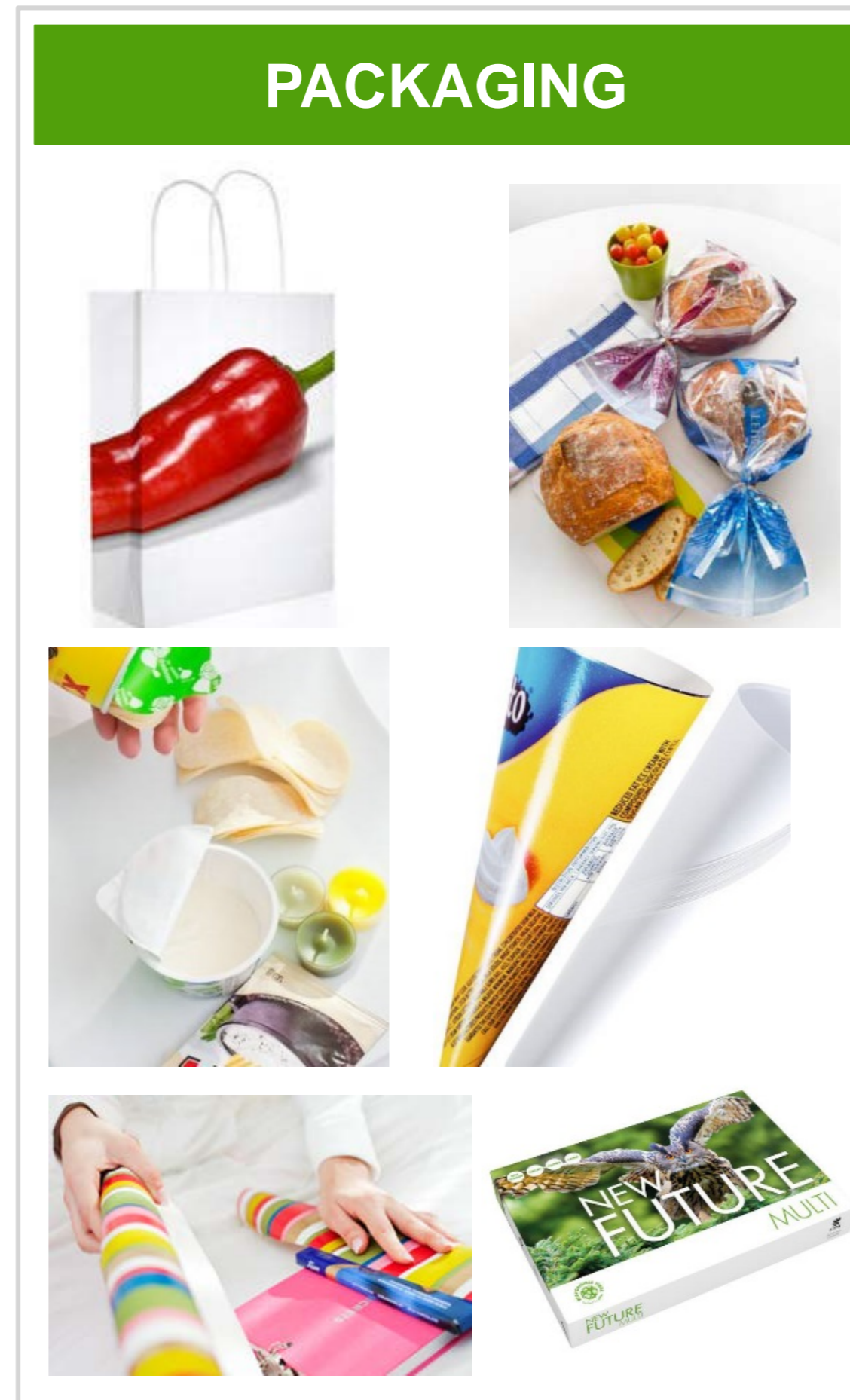
1. Capturing the market growth in the current markets and product areas
2. Increased distribution coverage and customer reach
3. Wider product portfolio
4. M&A when opportunities emerge

Enabled by scalable operating platform & efficient investments

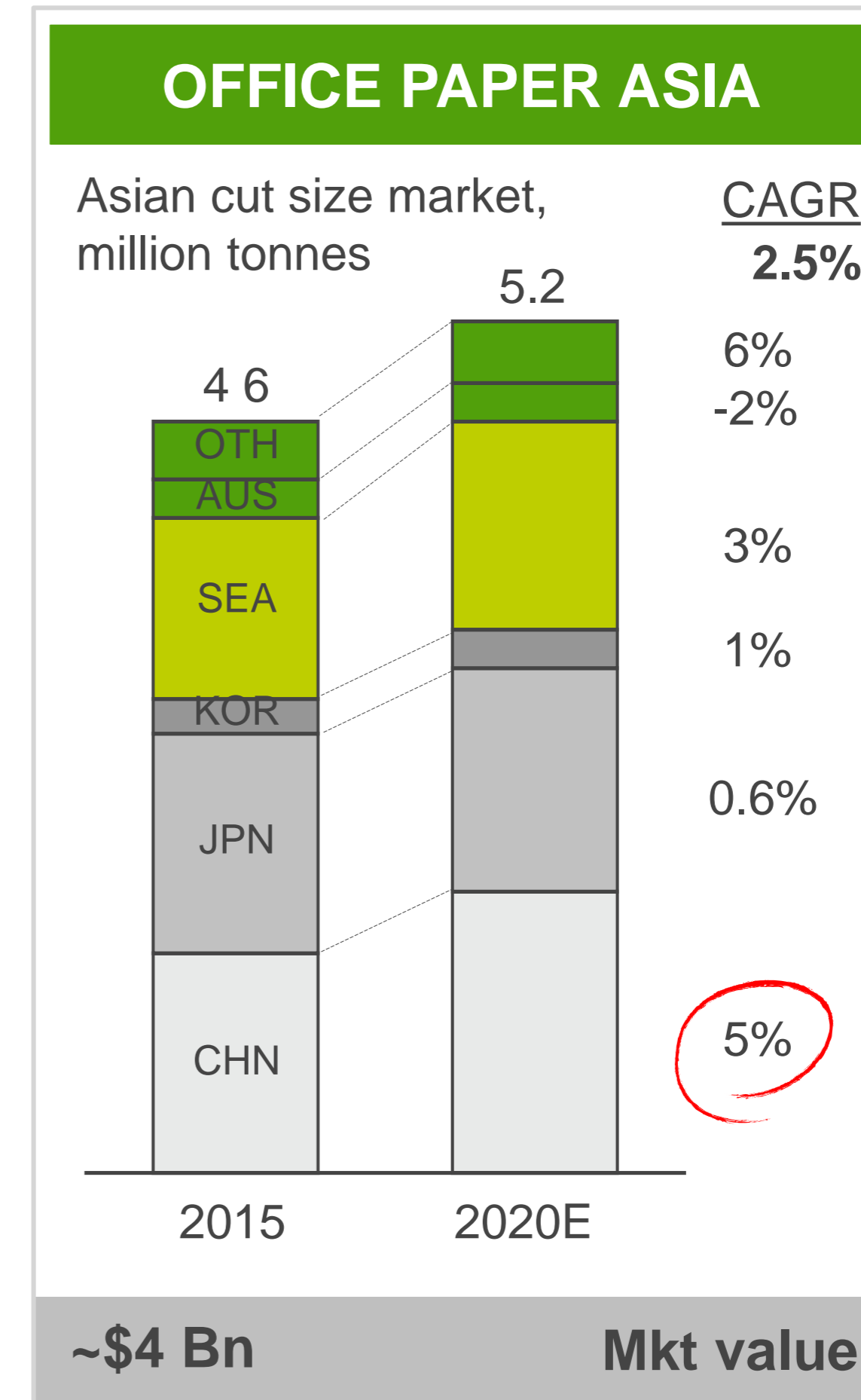
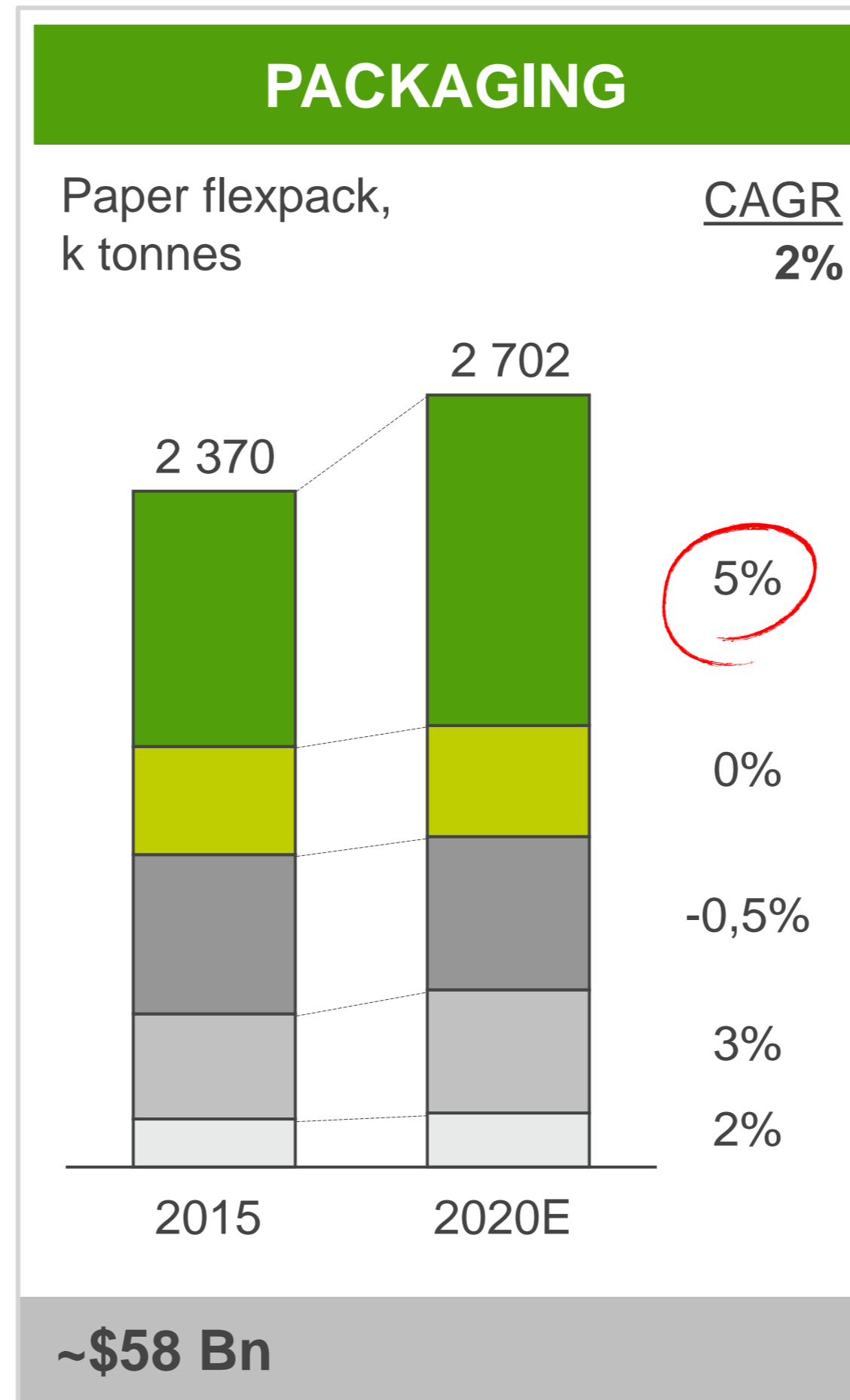
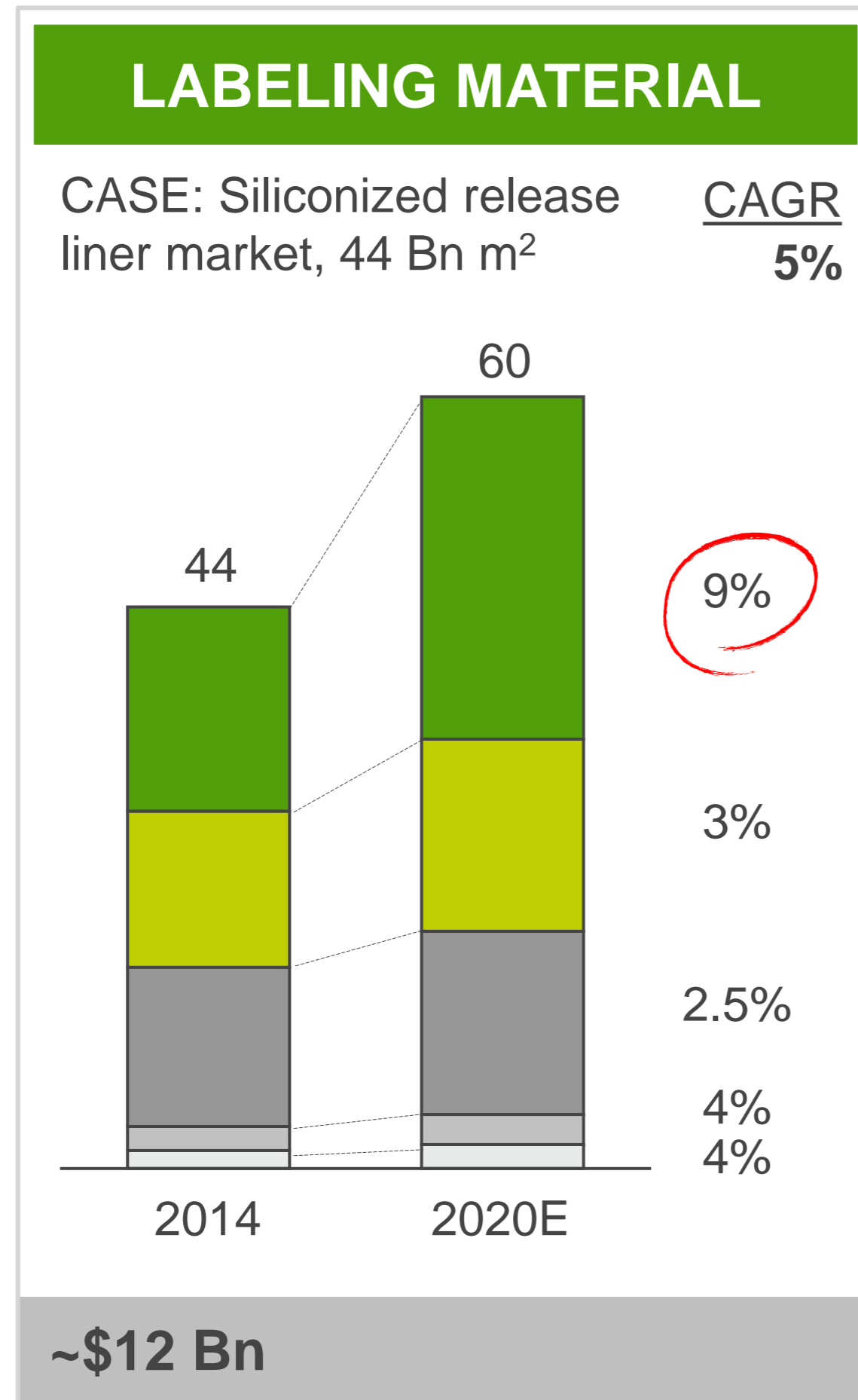
Tailored marketing
Productivity Population growth
Single households Consumerism
Reliability Packaged food Ease of use
Private consumption
Label demand
Urbanisation E-commerce
Sustainability Differentiation
Retailing changes Regulation
Higher standard of living Shelf-appeal
Product safety



Focus on Labeling materials, Packaging and Office paper in Asia

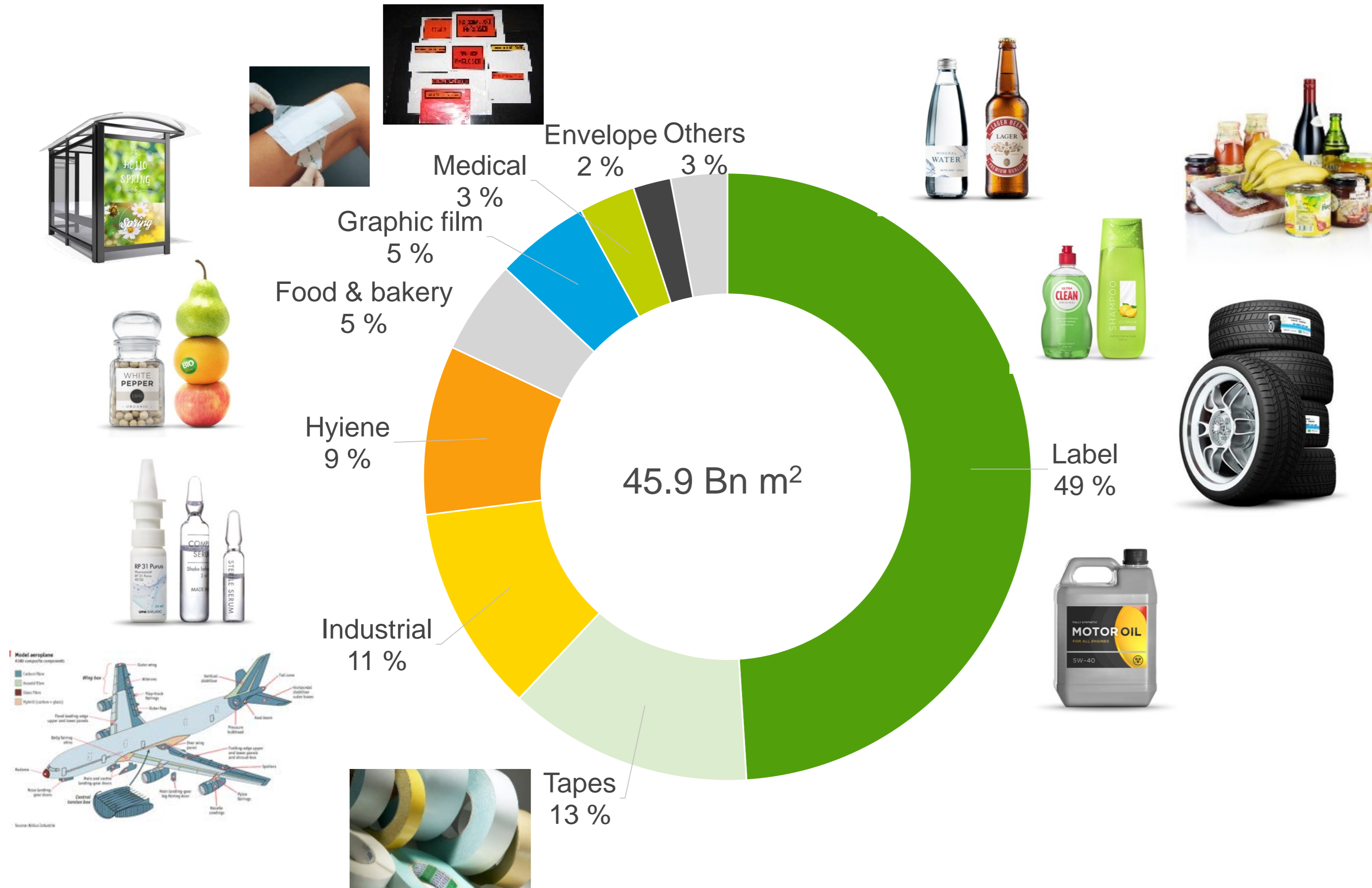


Our end use markets are growing



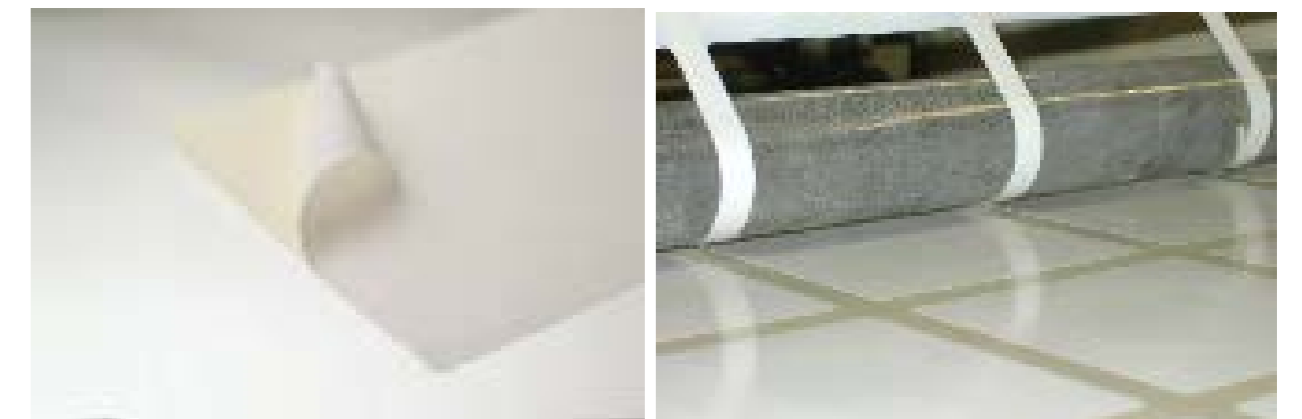
■ Asia
 ■ North America
 ■ Europe
 ■ South America
 ■ MEA

Global release liner market: Applications



Product functions:

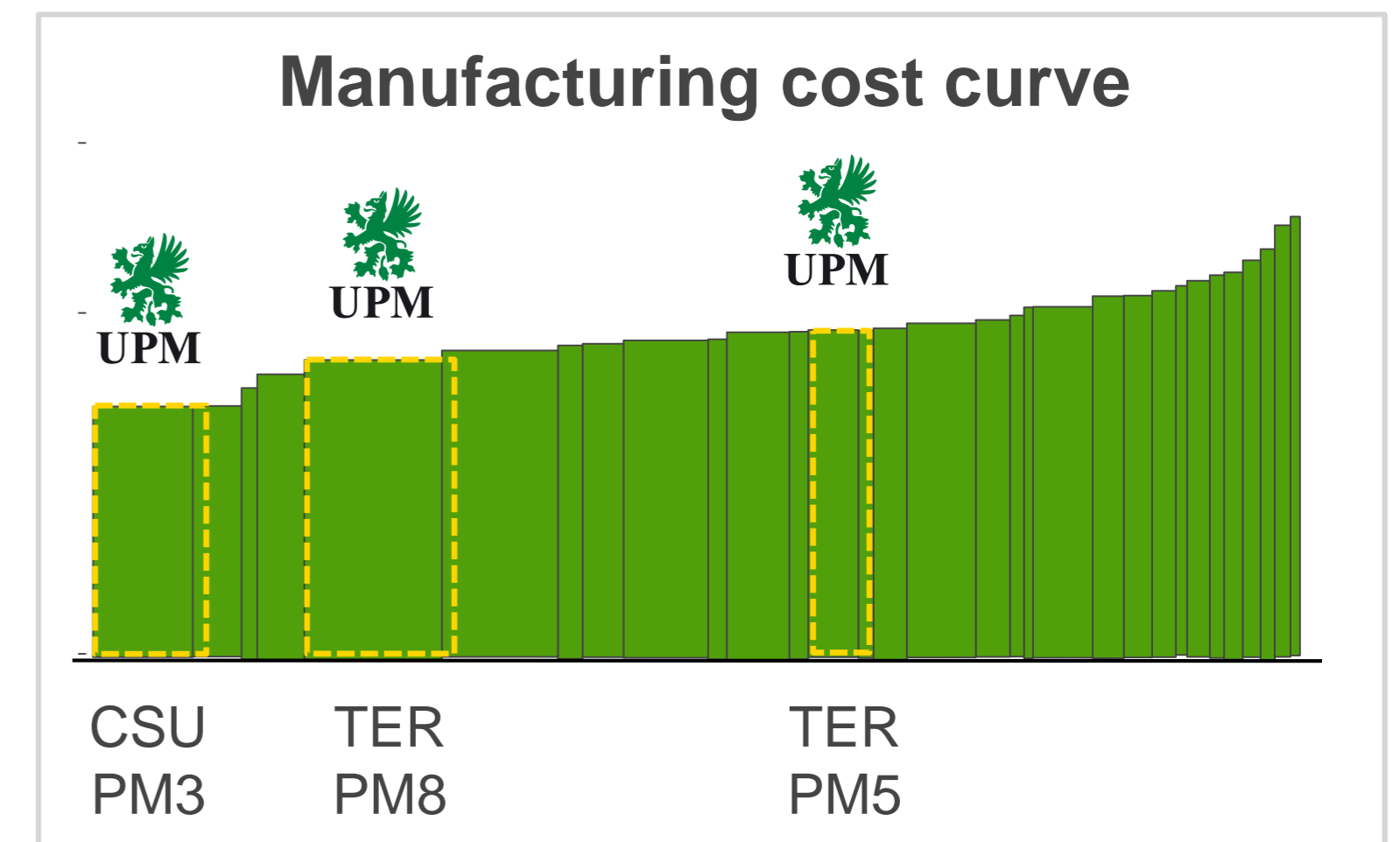
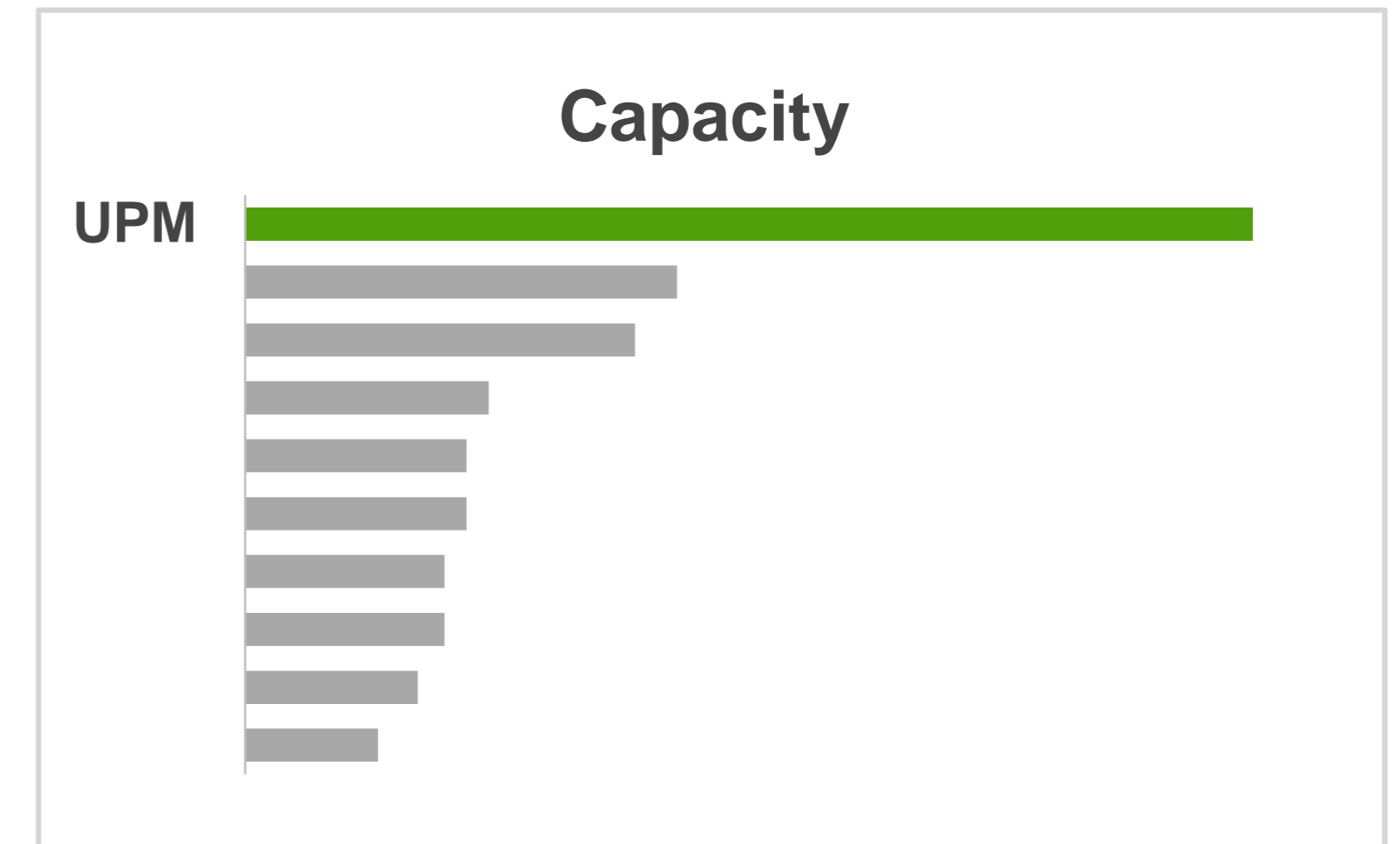
- Release liner carries the adhesive and face material
- Prevents the adhesive from sticking permanently
 - Important and often critical feature of a layered construction



Source: AWA

UPM strengths in Release liner – competitive assets and global customer base

Go-to-market	Deep customer relationships	Focus on key accounts has significantly increased customer satisfaction
	Global sales network	Salesforce concentrating on LP&R products supporting local and global customers
Assets	Superior product quality	Quality stability and performance in low basis weight papers, comprehensive portfolio, and innovative products
	Operational efficiency	Extensive production experience with a strong cost focus
	Competitive production platform	Cost competitive machines and distribution network

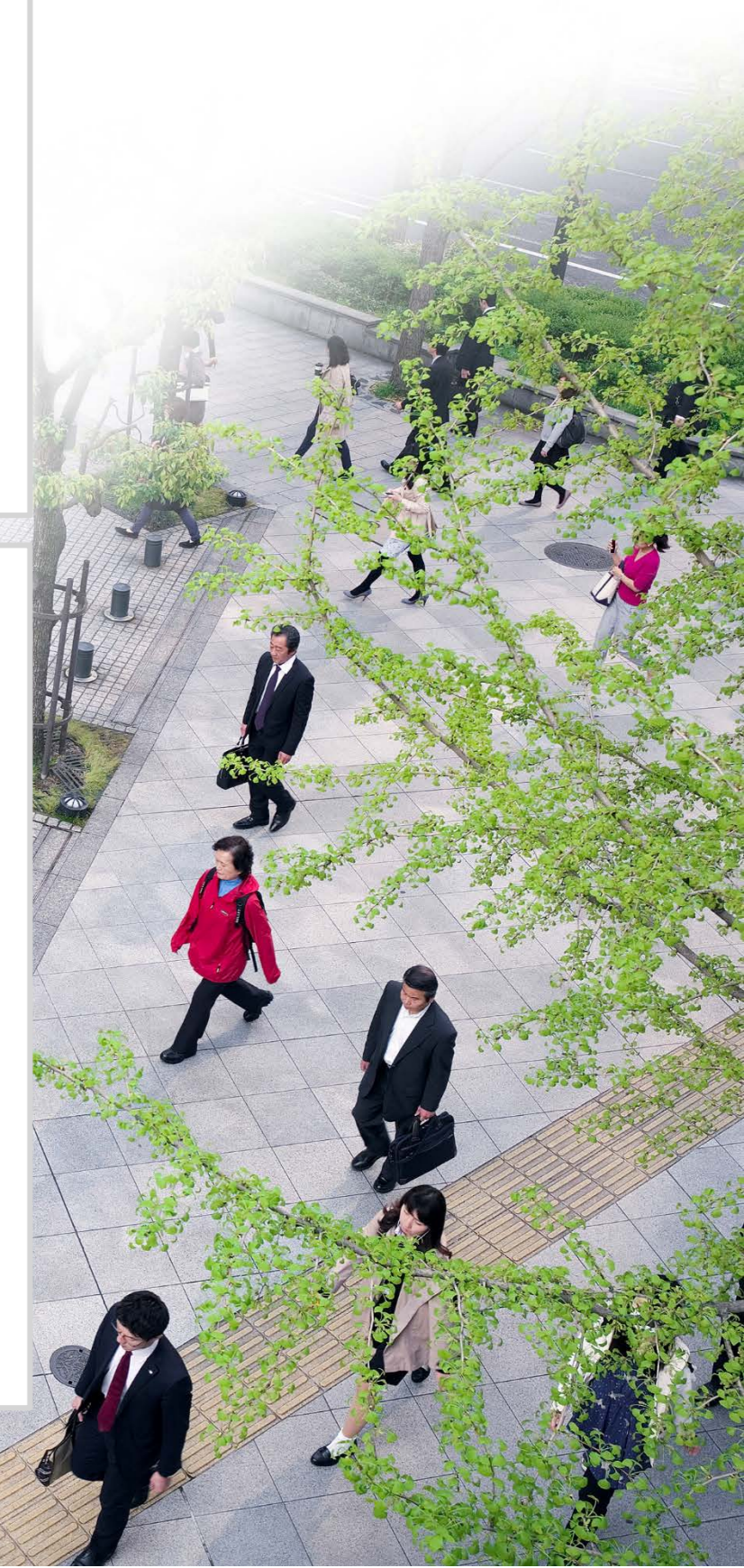
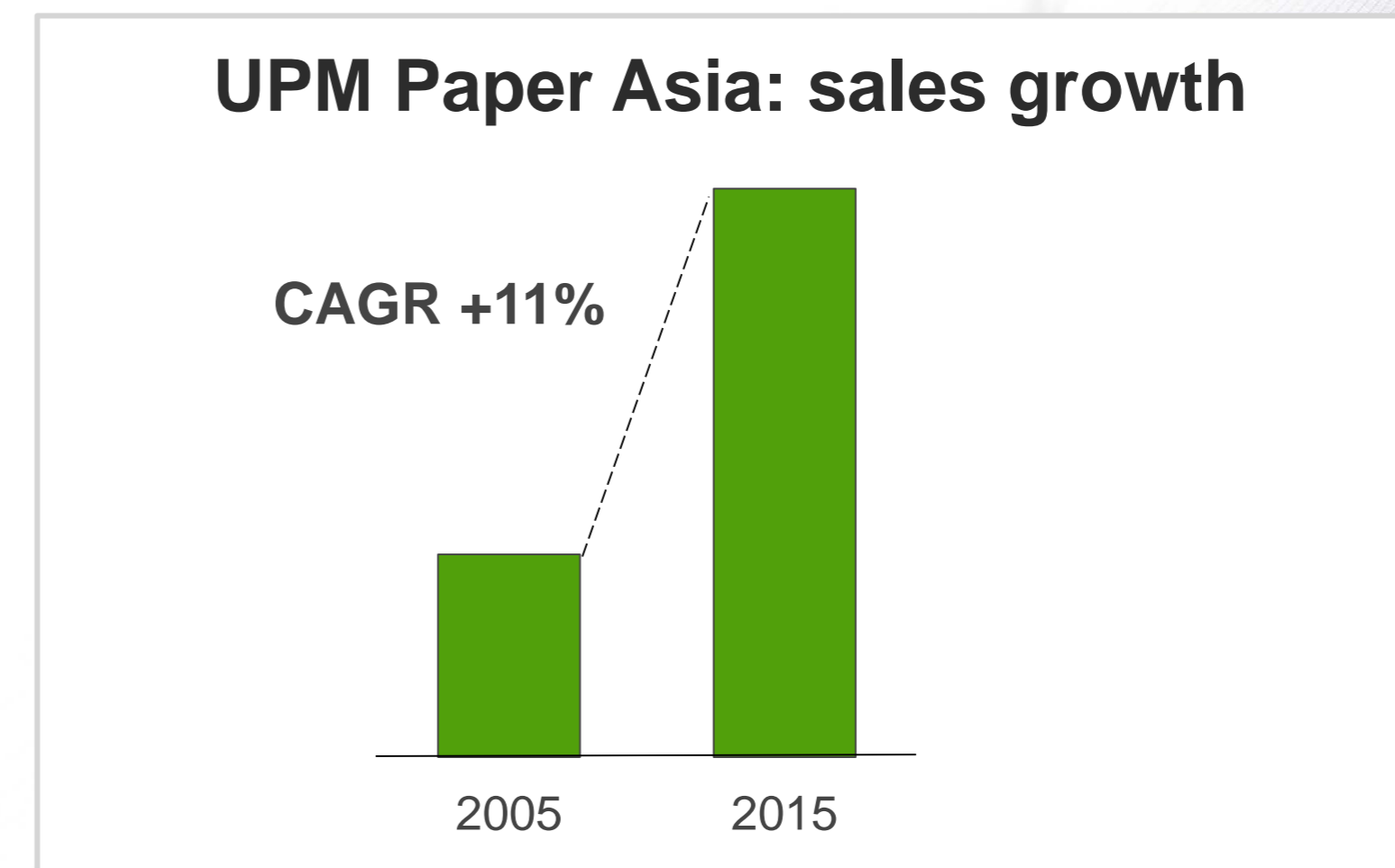
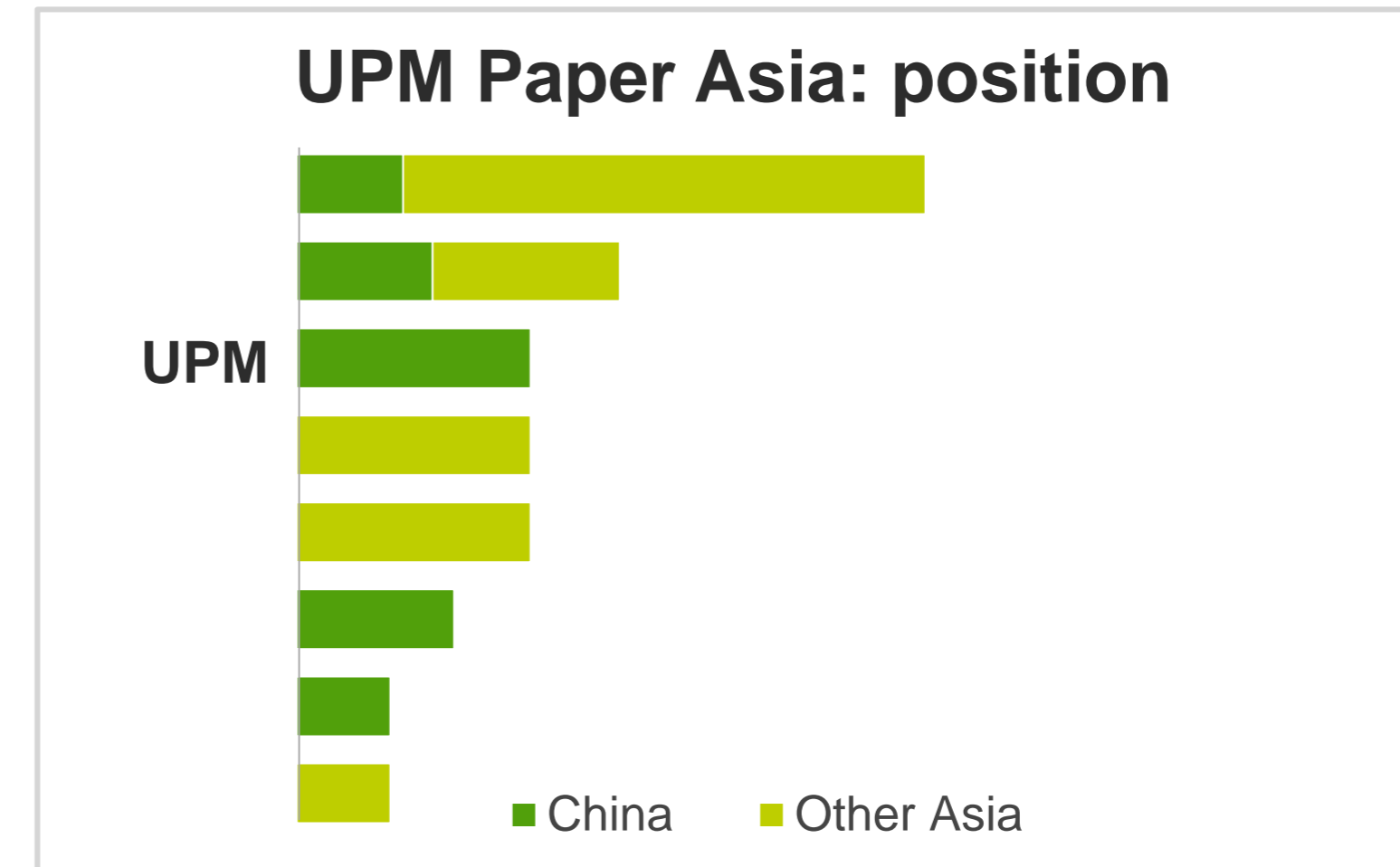


Source: RISI, Poyry, UPM

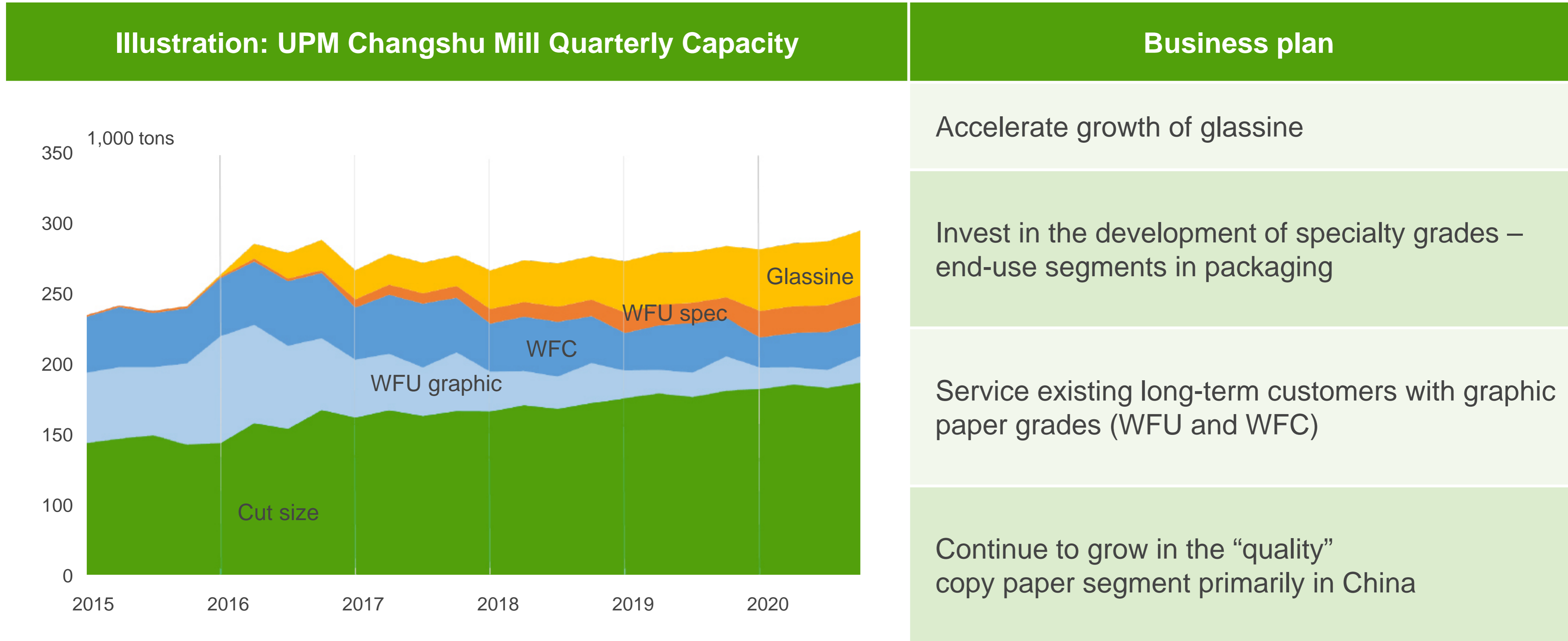
China is the main office paper market in Asia

Consumption increase supported by

- **Economic growth** is driving establishment of new enterprises
- **Establishment of new enterprises** increases installation of new copiers
- **Growing economy** drives the need for more documentation, and increase in personal printer population
- **Urbanization** supports demand for specialized business services



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”



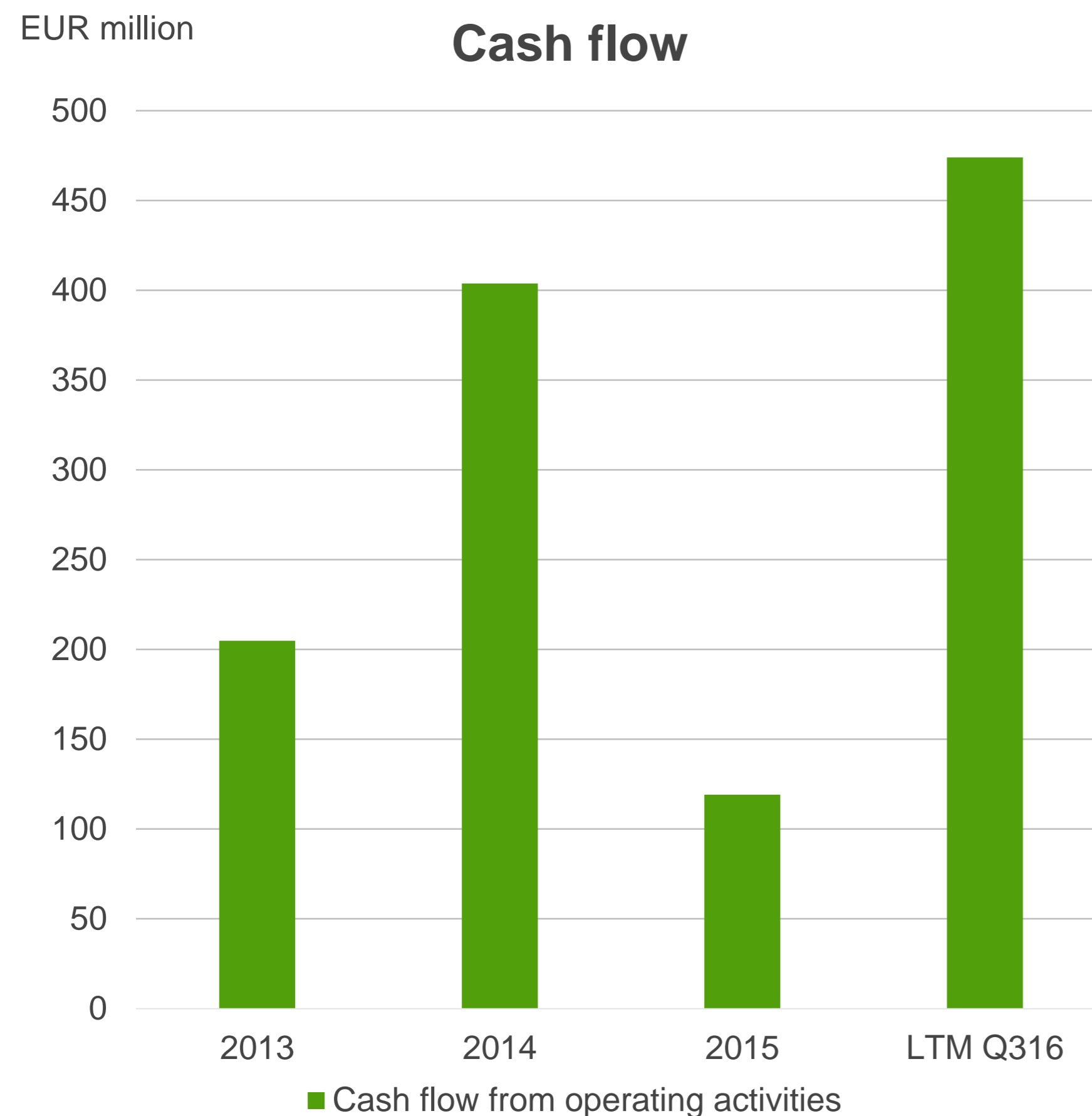
4

Cash flow

“performance management and discipline”

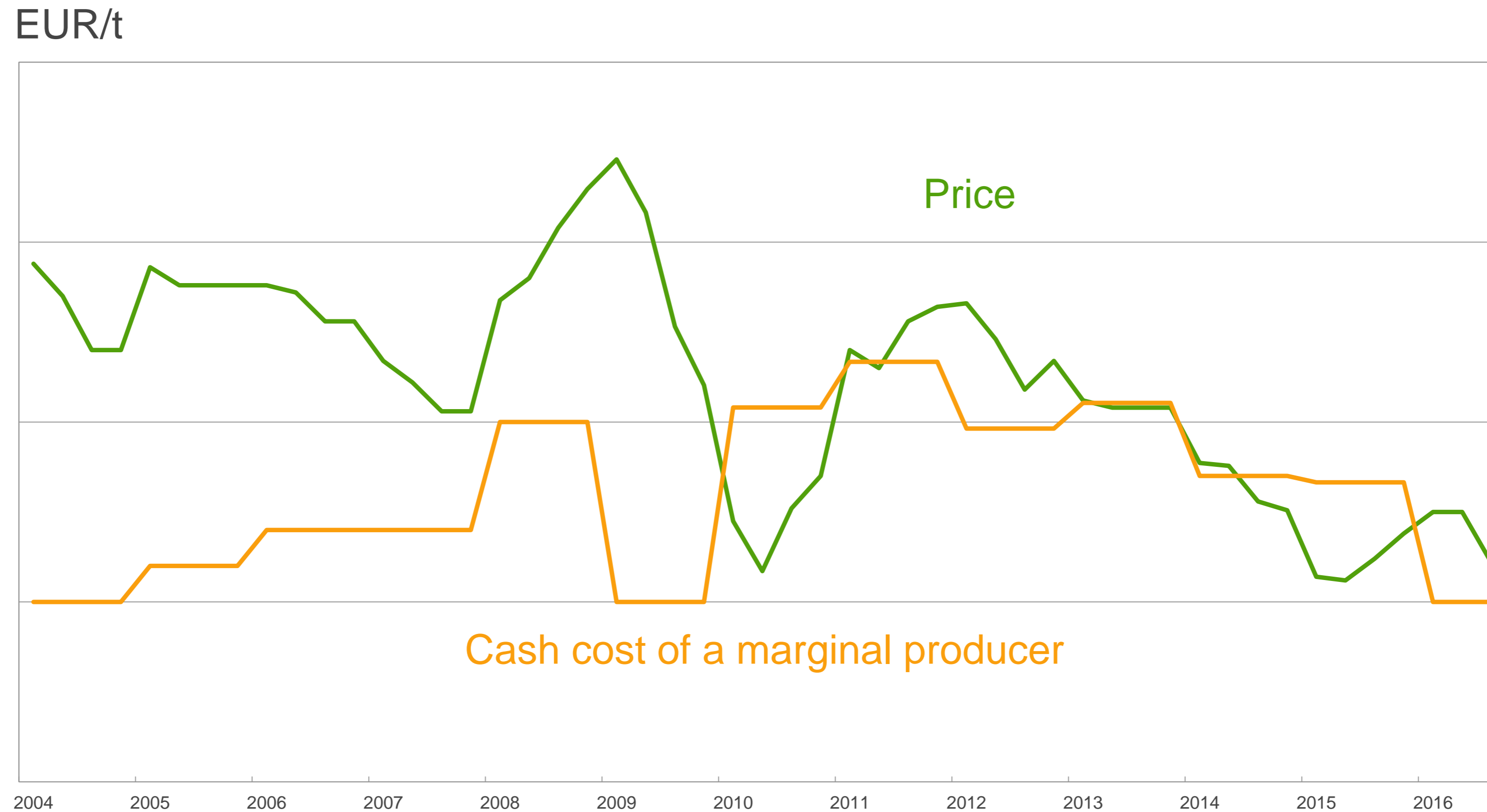
UPM Paper ENA

Key messages



- Paper ENA has proven the ability to generate good results
- Strong focus on performance at all fronts resulting in attractive cash flow
- Not only “WHAT” we do matters, but also “HOW” we do matters
- Granular understanding of end use trends combined with an efficient use of a large operative platform continues to offer optimization opportunities

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

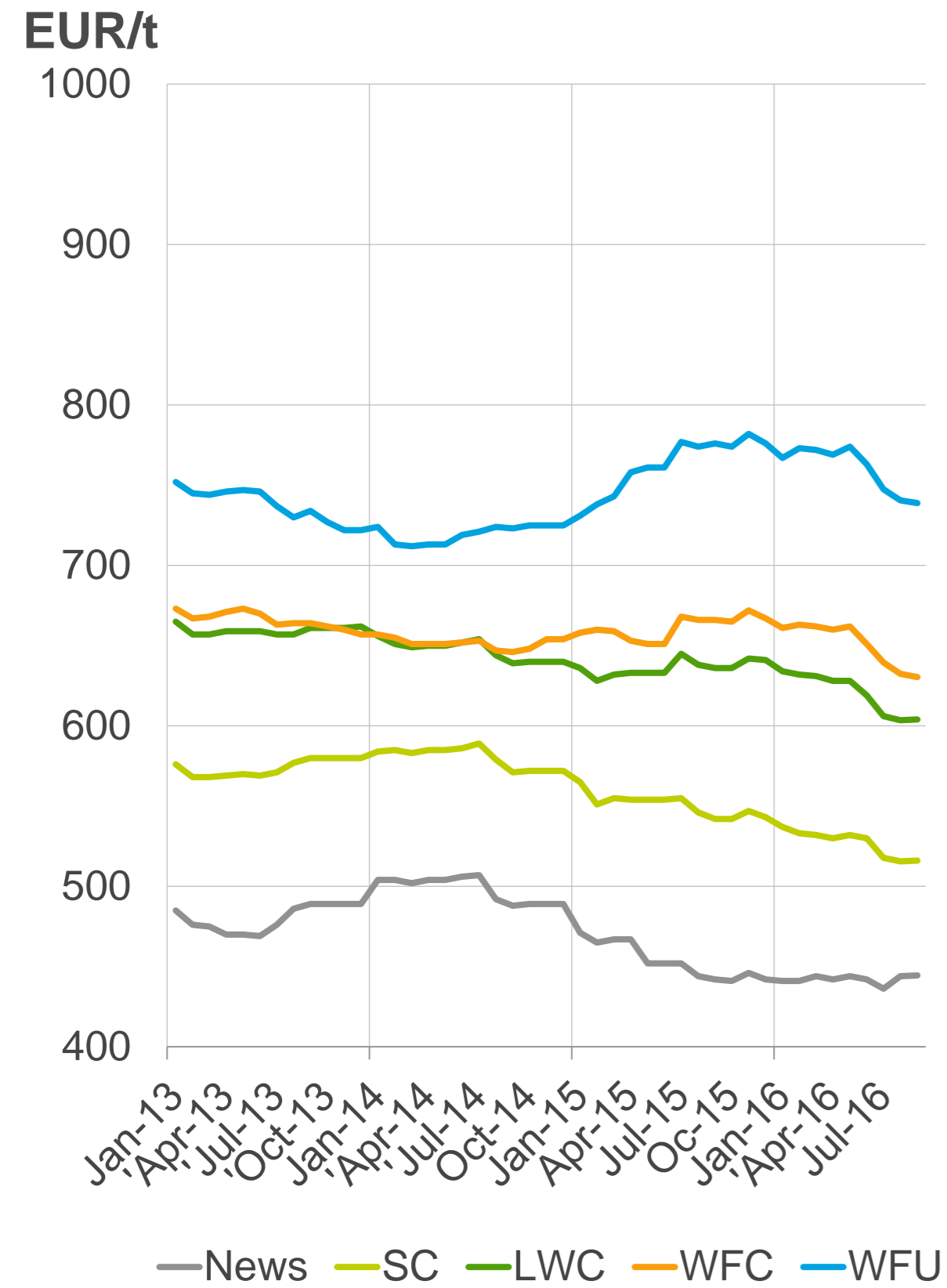


Sources: PPI, RISI, Pöyry

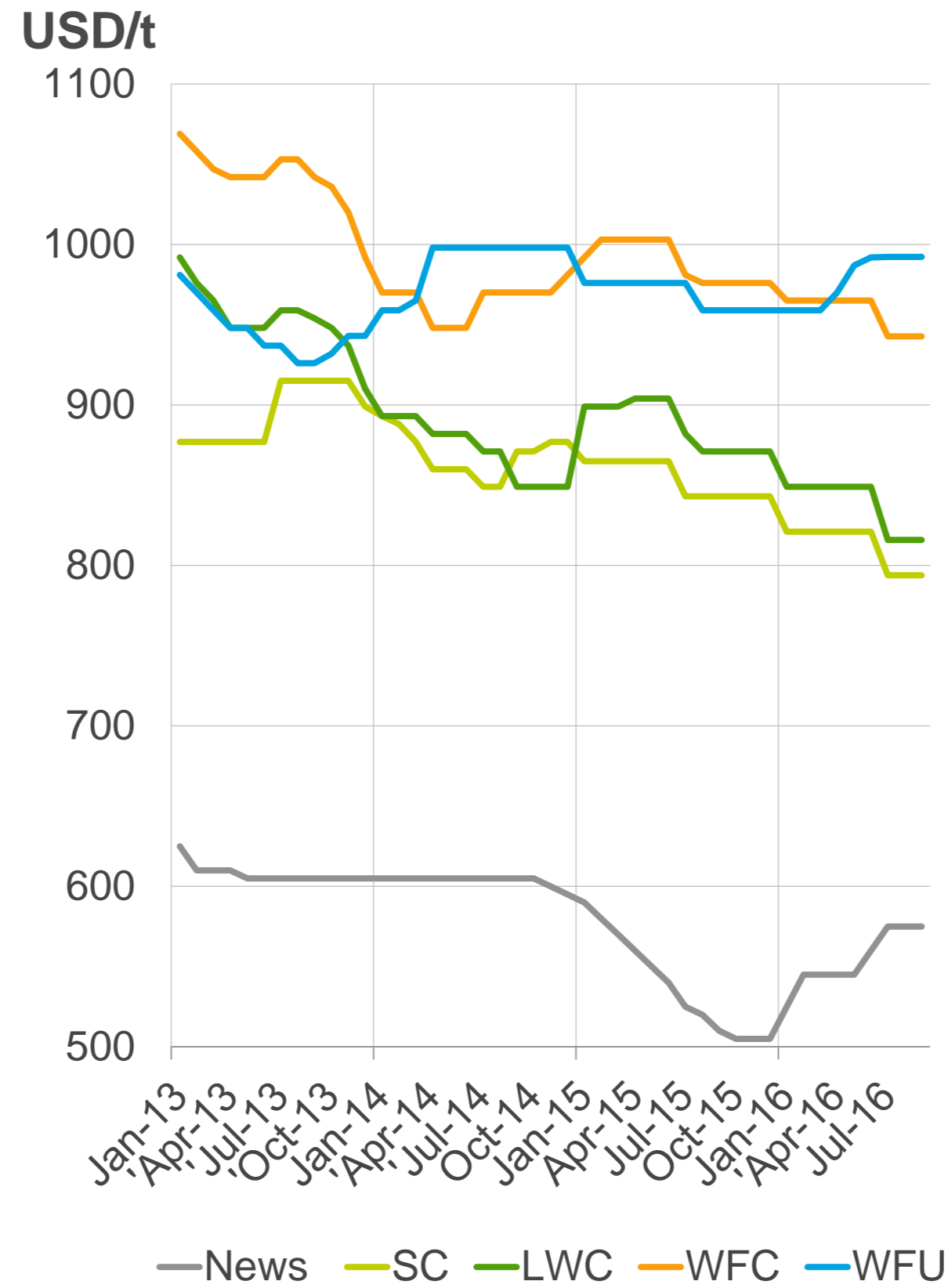
UPM Paper ENA

Graphic paper prices

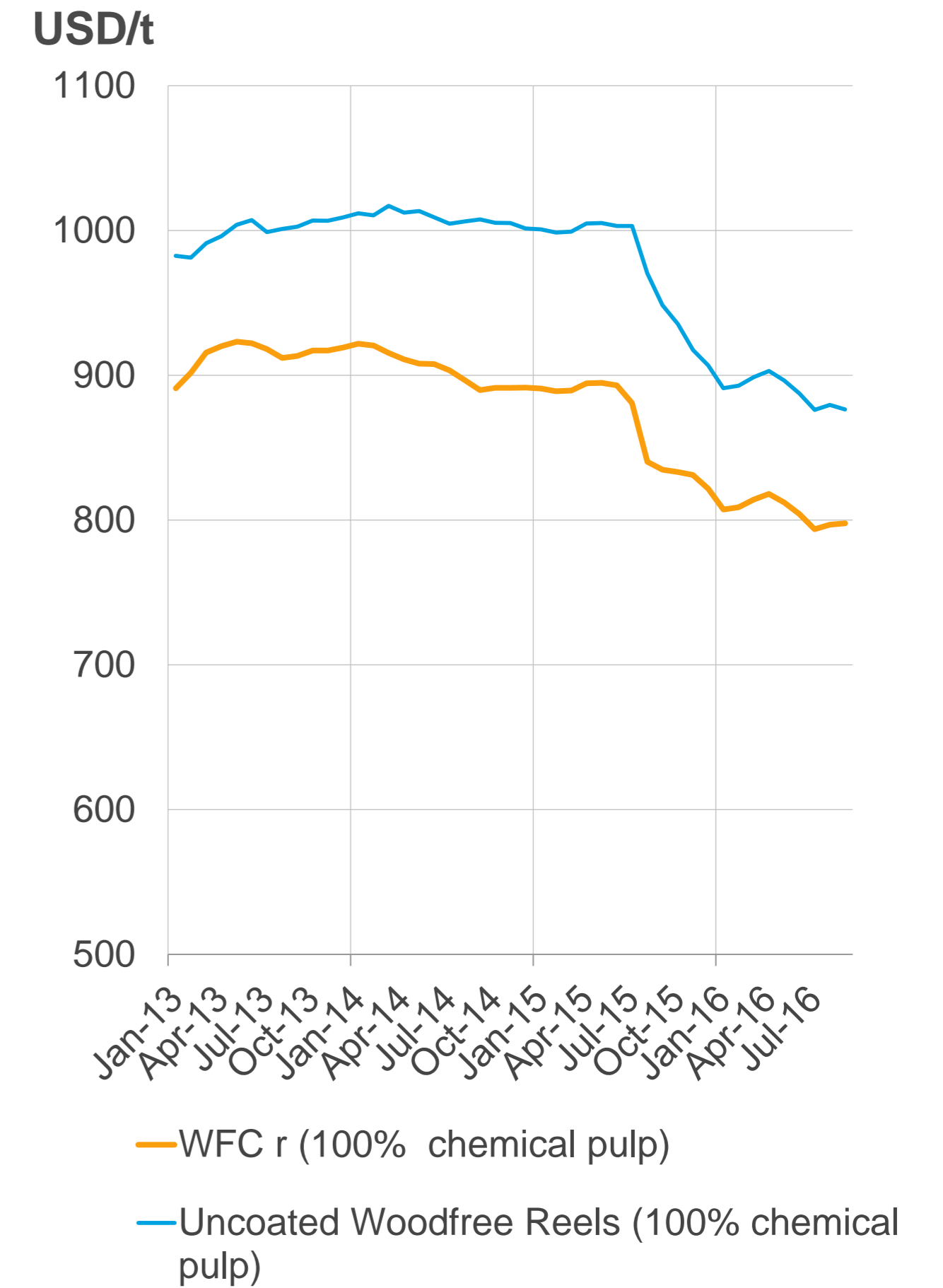
Europe



North America



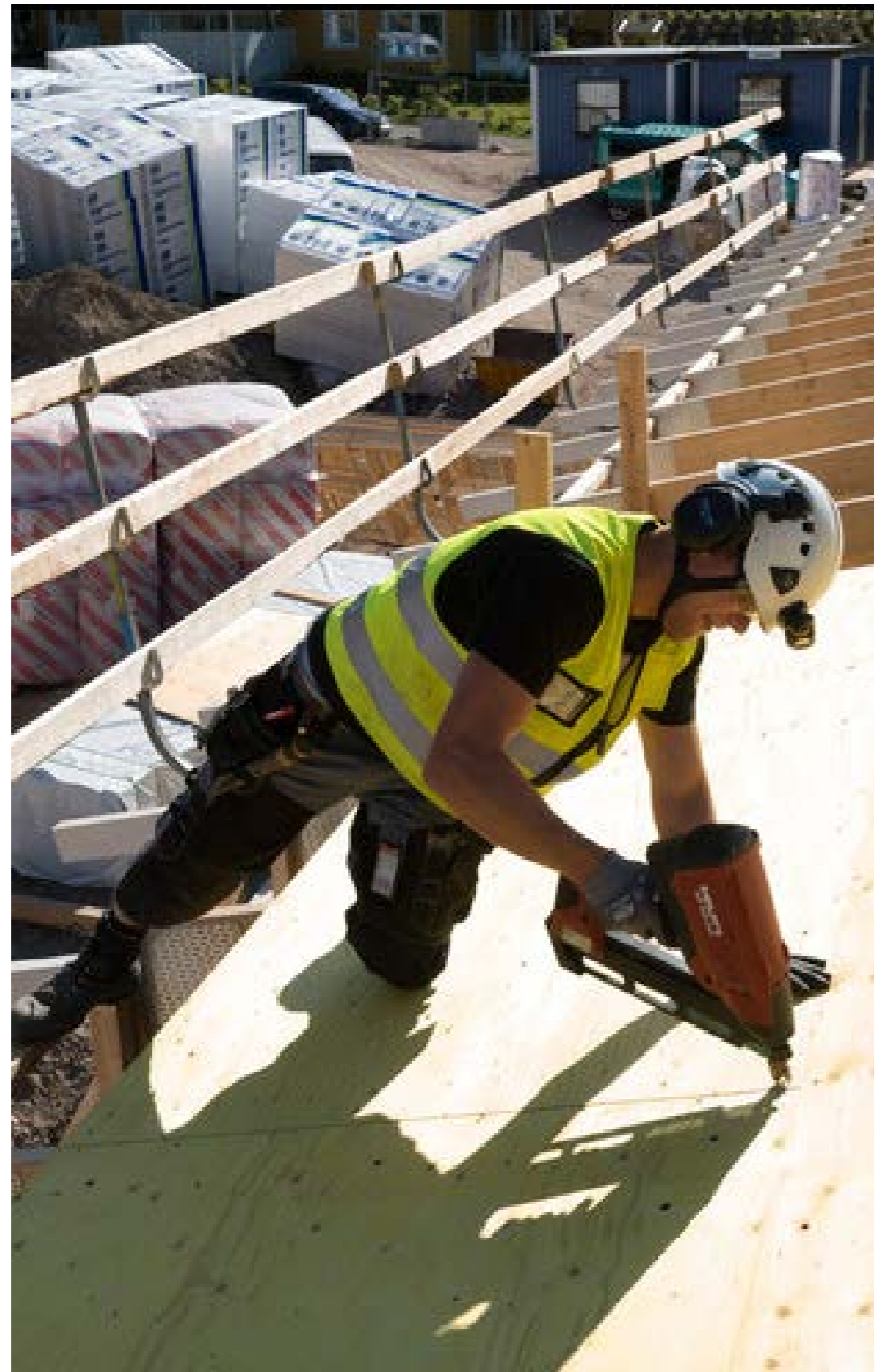
China



UPM Plywood

UPM Plywood in end-use

Construction



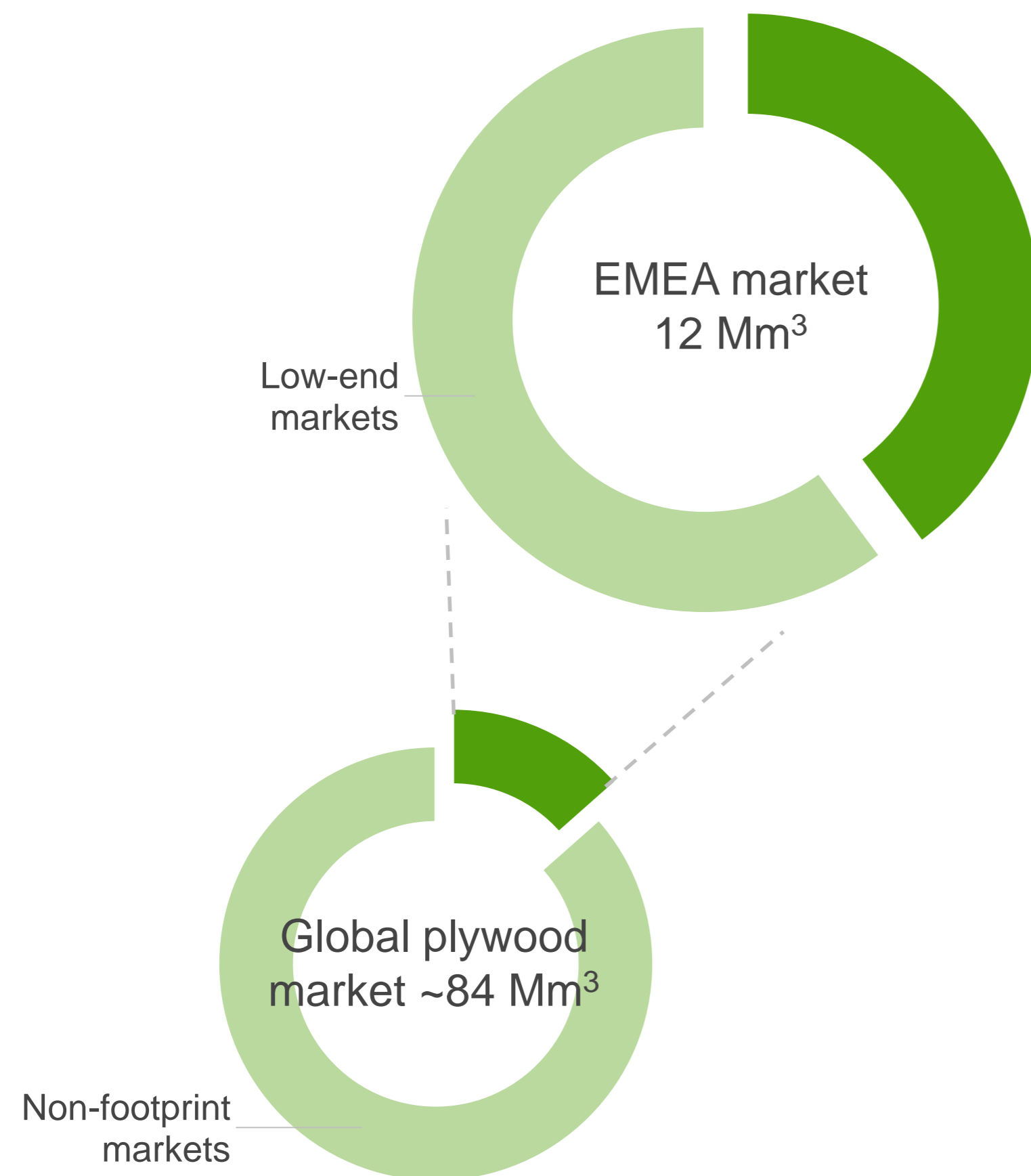
Vehicle flooring



LNG shipbuilding



Relevant high-end market offers meaningful growth potential



Relevant market ~5 million m³

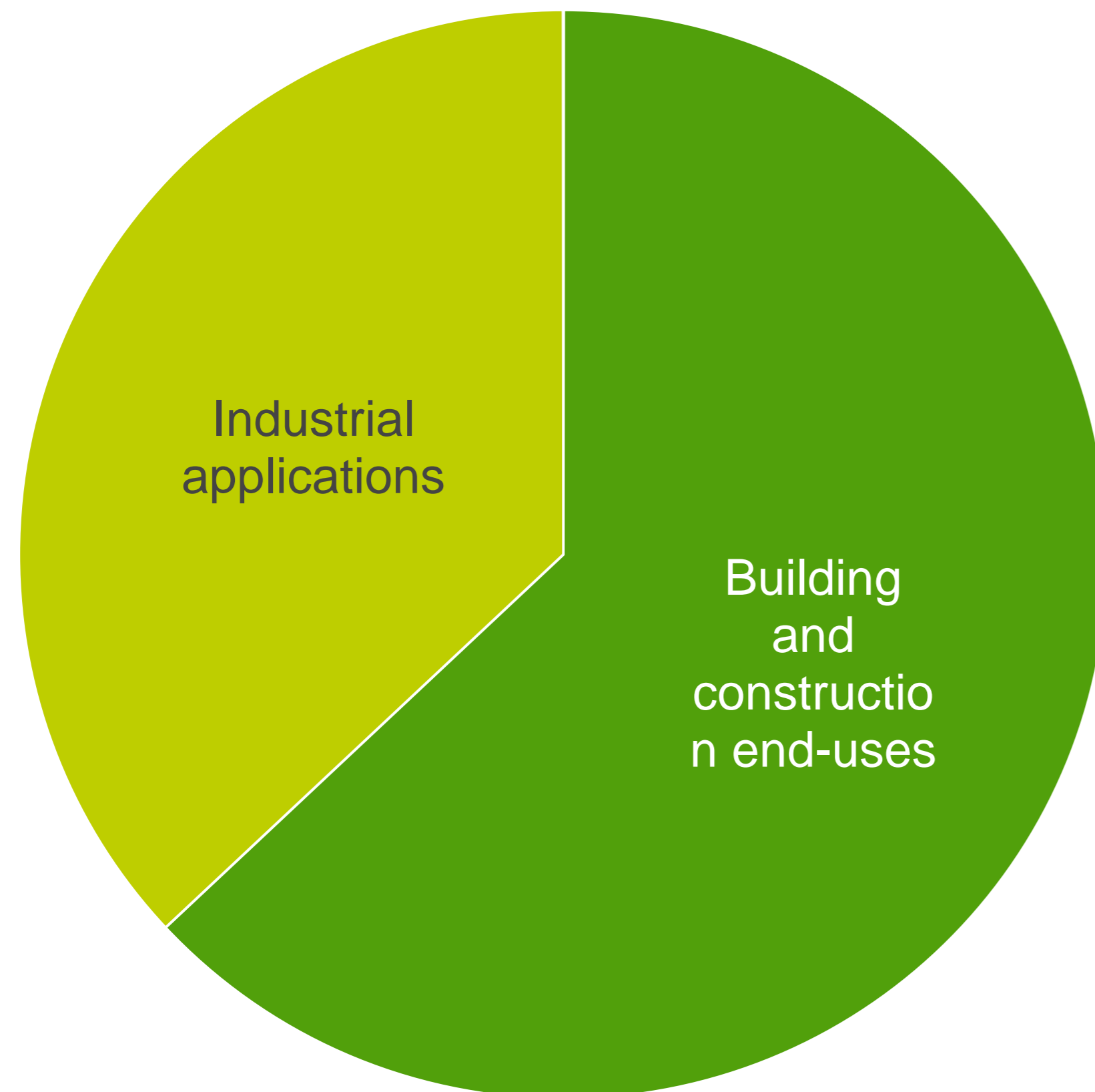
- High-end demanding applications & customers
- Medium range standard products
- EMEA region
- Global LNG business

- 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

Share of sales 2015



- 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 ~100 vessels)

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

The way forward

Otepää mill expansion

- Responding to market and customer demand in key segments
- Increase capacity to 90,000 m³, representing 10% of UPM Plywood's capacity
- New bio-boiler to improve overall material efficiency and to lower environmental footprint

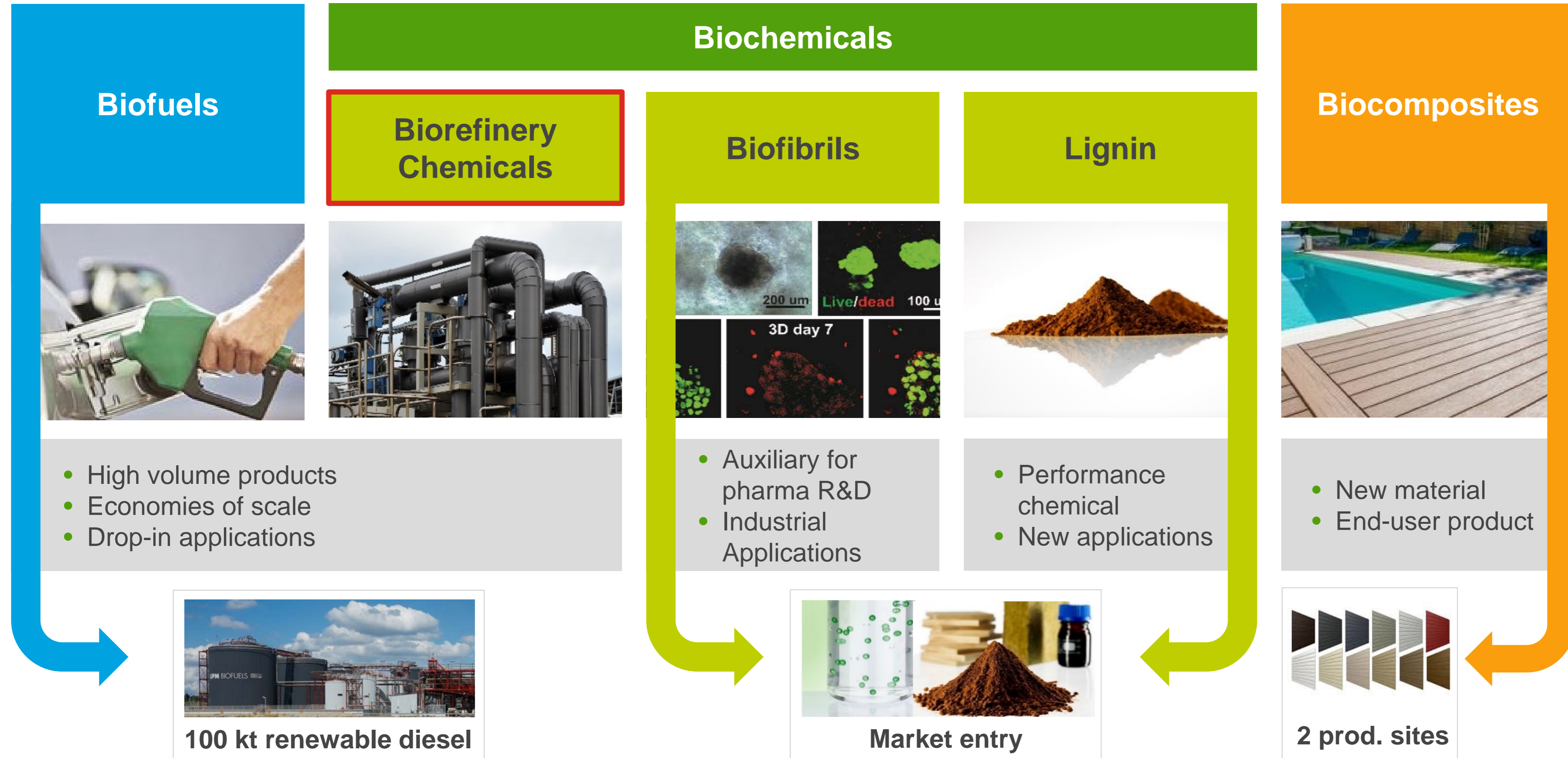
The way forward

- Focused investments in existing production sites to maximise returns at low risk
- Continue with the proven commercial approach to further improve customer engagement

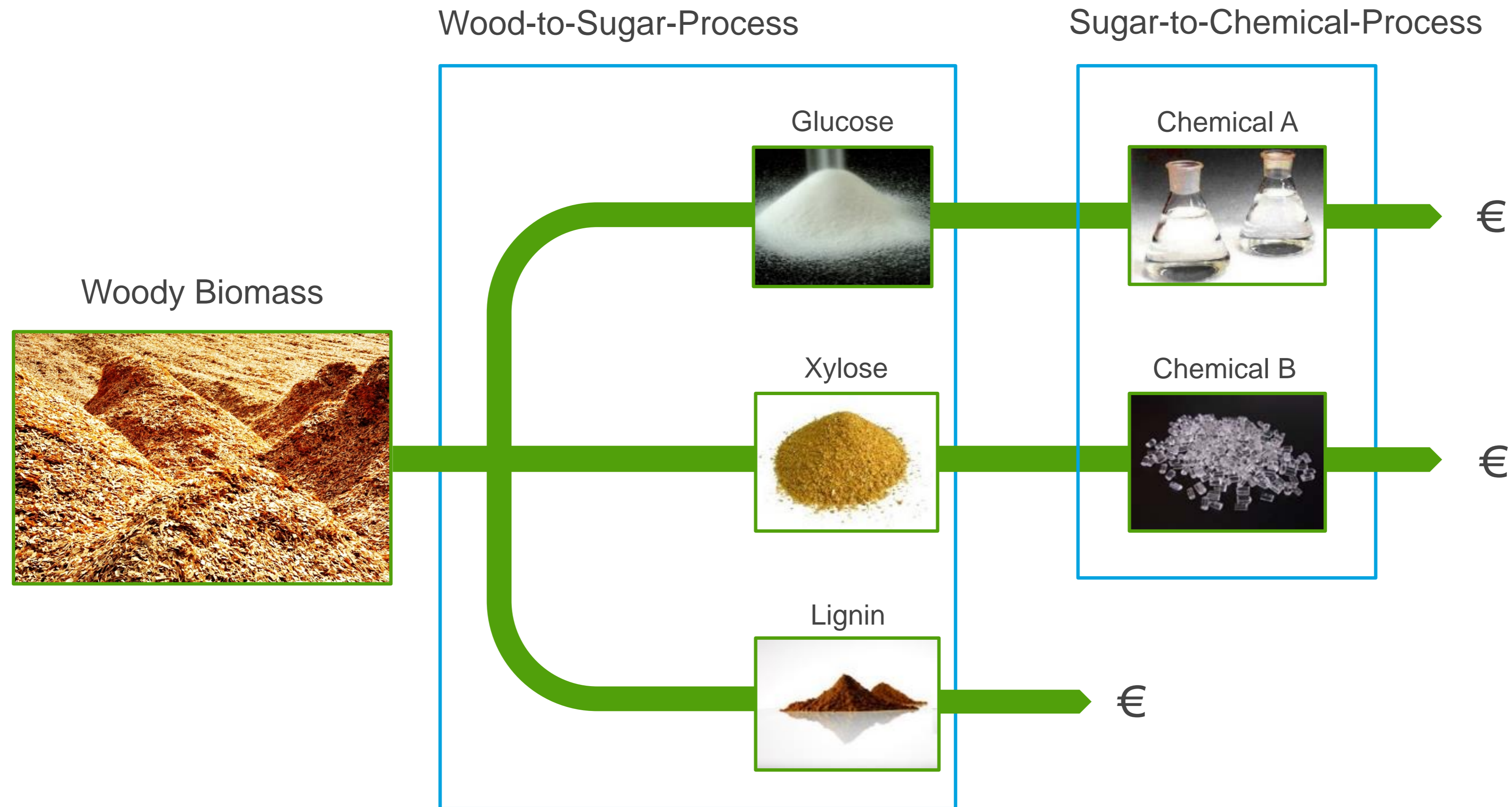




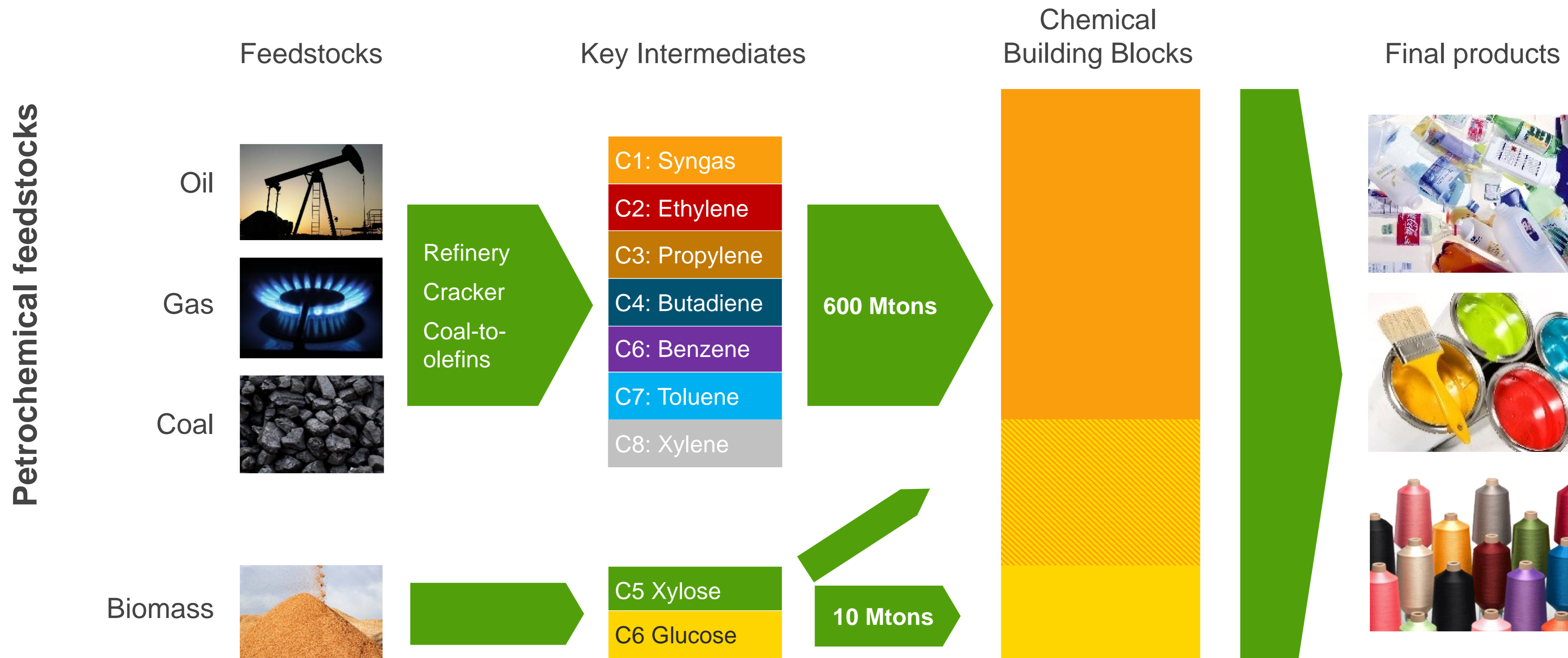
New business opportunities for UPM



New separation technologies ensure best overall value capture



Partial overlap with fossil-based value chains in chemicals





UPM

The Biofore
Company