

Paper business line offering



Board and paper

- Board and paper production lines
 - Recycled fiber lines
 - Tailor-made OptiConcept machines
 - OptiConcept M modularized machines
- Rebuilds
 - Modernizations and grade conversions
- Stand-alone products
 - From stock preparation to roll handling
 - e.g. headboxes, sizers, winders



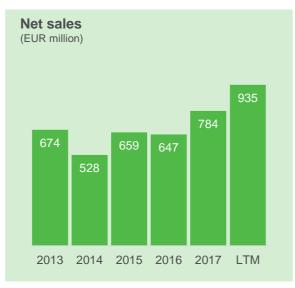
Tissue

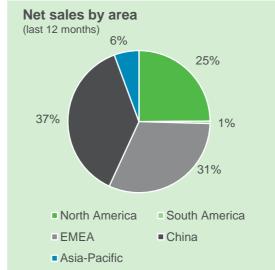
- Tissue production lines
 - Advantage DCT
 - Advantage NTT/QRT/eTAD
 - Advantage Thru Air (TAD)
- Rebuilds
- Stand-alone products
 - From stock preparation to roll handling
 - e.g. Yankee cylinders, ViscoNips, Re-Winders

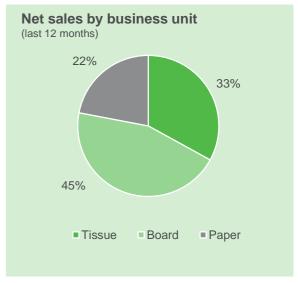


Paper key figures at a glance









EUR **0.7** br

Market drivers							Market position	Marl
Tissue		Board		Paper		Tissue	#1	~3
	Rise in purchasing power and living standards	M	World trade, e-commerce and emerging markets growth drive		Increasing role of digital media decreases demand for		Market position	
M	Fast growth in emerging markets		packaging Demand for light weight board	0	printing papers Demand for technology driven	Board	#1	~4
M	Demand for higher quality	3	Shift from plastic packaging to renewable materials		efficiency improvements Demand for specialty papers	aper	Market position	Mark



Long-term end

Conversions from paper to board

Recent development

Recent development

Customer

echnology

Process

People

• #1 position in tissue, board and paper

- · Good growth in orders received
- Improvement in product cost competitiveness
- New products 25% of order intake
- Industrial Internet solutions: Performance Center. Customer Portal and Performance applications well received by our customers
- Positive project margin deviation
- High procurement savings
- · Quality costs reduced
- · Successful capacity cost management
- Career development
- High impact development projects by global training program participants

New products and applications

- 2/3-layer headbox with possibility to feed functional additives
- Forming with shoe and blade technology for energy efficient and flexible board production
- Energy efficient sizing with hard-cover nip rolls for improved end product strength properties
- Agua cooling technology for higher bulk and raw material savings
- Advantage QRT and eTAD tissue machine lines for production of structured tissue with less energy and fibers
- Advantage ViscoNip press with flexible press load to improve paper quality or reduce energy consumption
- Advantage ReDry system utilizes excess heat to increase press dryness





Outlook

Containerboard and tissue are the fastest growing products

- World demand for paper and board is forecasted to grow 1.3% p.a. in the long term, reaching 486 million tons in 2030.
- Consumption growth per paper grade 2016A-2030F:

- Containerboard +62 million tons (+2.4%)

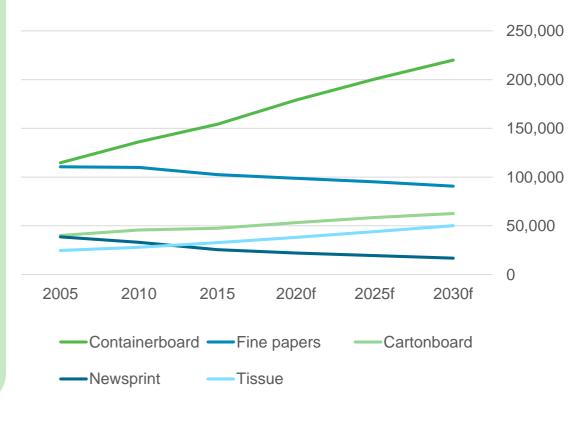
- Fine papers -10 million tons (-0.3%)

- Cartonboard +15 million tons (+2.0%)

- Tissue +17 million tons (+2.9%)

- Newsprint -8 million tons (-2.8%)

Consumption ktons p.a.



Source: RISI



Business opportunities

eCommerce



Global sales in 2017 reached
USD 2.3 trillion
Forecasted to grow 141%
from 2016 to 2021

Replacing plastic



2017 - Total size of packaging business **EUR 600 billion p.a.**Fiber based 36%
Plastic 40%
Growing 3-6% p.a.

Emerging markets



Expected to drive the global tissue growth, accounting for **83%** of incremental demand by 2030



Actions to improve flexibility, profitability and market share

Actions to improve flexibility, profitability and market share

Customer

- Increase business in low market share countries
- Focus on products with low market share
- Ensure customer satisfaction

echnology

- Continue to increase margin by product cost competitiveness improvement
- Maintain technology leadership
- New innovative offering for resource efficiency and plastic replacement
- Integrated Industrial Internet solution

Process

- Improve profitability with successful project deliveries
- New ERP implementation with improved and harmonized delivery processes
- · Continue the path towards industry benchmark level in quality
- Increase flexibility in operations through global footprint development

People

- · Continue global capability development
- Global mobility and internal job rotation





Customer loyalty with repeat orders

Case Nine Dragons: Six containerboard making lines in China



Six containerboard making lines with modern industrial design. In addition to increasing safety and usability, the board machines are also very energy and resource efficient and suitable for high-speed production.

Remote support from Valmet.



Improving together

Case Hayat Kimya: Growing fast in the Middle East



Six Advantage DCT 200TS tissue making lines and one major rebuild in four countries within nine years.

Cost and energy efficient production with high capacity and tissue product quality.



