

# The new slower growth period started

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Area President, China

December 10, 2014

# Valmet in China

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- 3 Main competitors
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# China area overview

Focusing on businesses in pulp and paper industry

## Our business

- We serve customers by providing technology and services for the pulp, paper and energy industries in China
- Improve customer relationship, understand the customers' real needs and provide competitive solutions

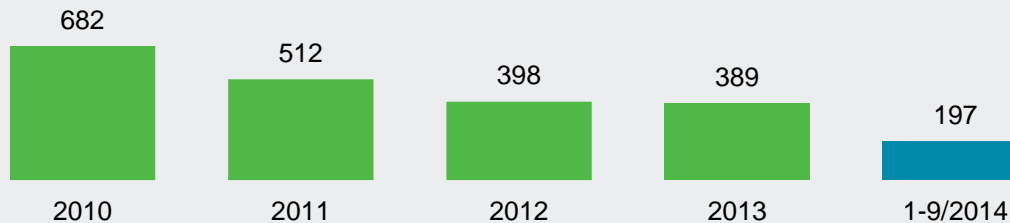
## Our customers

- Our customers are in leading position in pulp and paper businesses
- Our customers are seeking for high performance and sustainability by investing on world class technologies

## Our achievements

- Large installed base in pulp and paper industry
- Good reputation for lifecycle service
- Continuous technology development
- We have established strong local presence to serve our customers

## Net sales



# Valmet offering in China

## Comprehensive offering in pulp and paper industry

- Complete paper, board and tissue making lines, rebuilds and key components
- Complete fiber lines and recovery islands, rebuilds
- Valmet full scope service for pulp and paper customers

## We have strong position at high end technologies

### Services



- Service net sales has been increased 57% in past four years since from 2010
- 70% of order received is from 10 key corporations
- Agreement based business has started to develop in the past two years

### Pulp and Energy



- 18 complete Valmet pulp lines are running at 13 customers
- We are #1 counted by delivered capacity of pulp lines and #2 by number of deliveries in wood pulp lines

### Paper

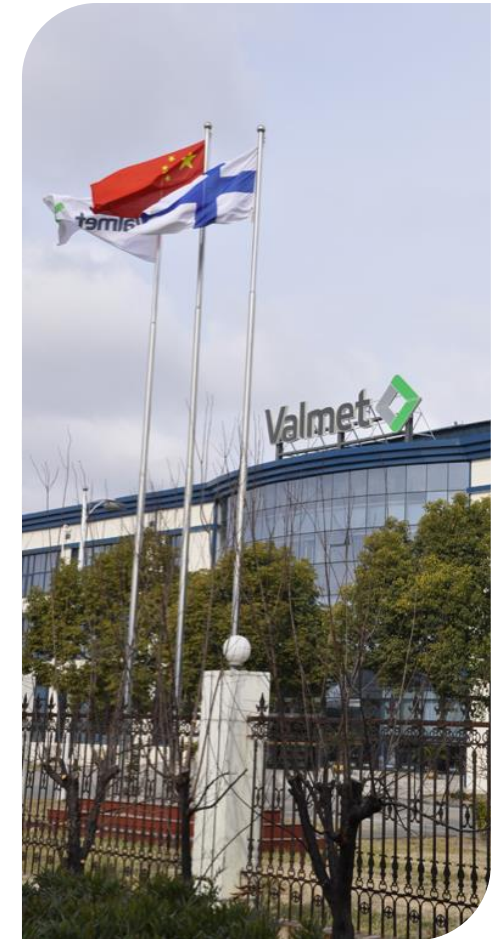


- More than 85 running Valmet paper and board machines and 17 tissue machines at 49 customers
- We are clearly #1 in paper and board machines and #2-3 in tissue machines

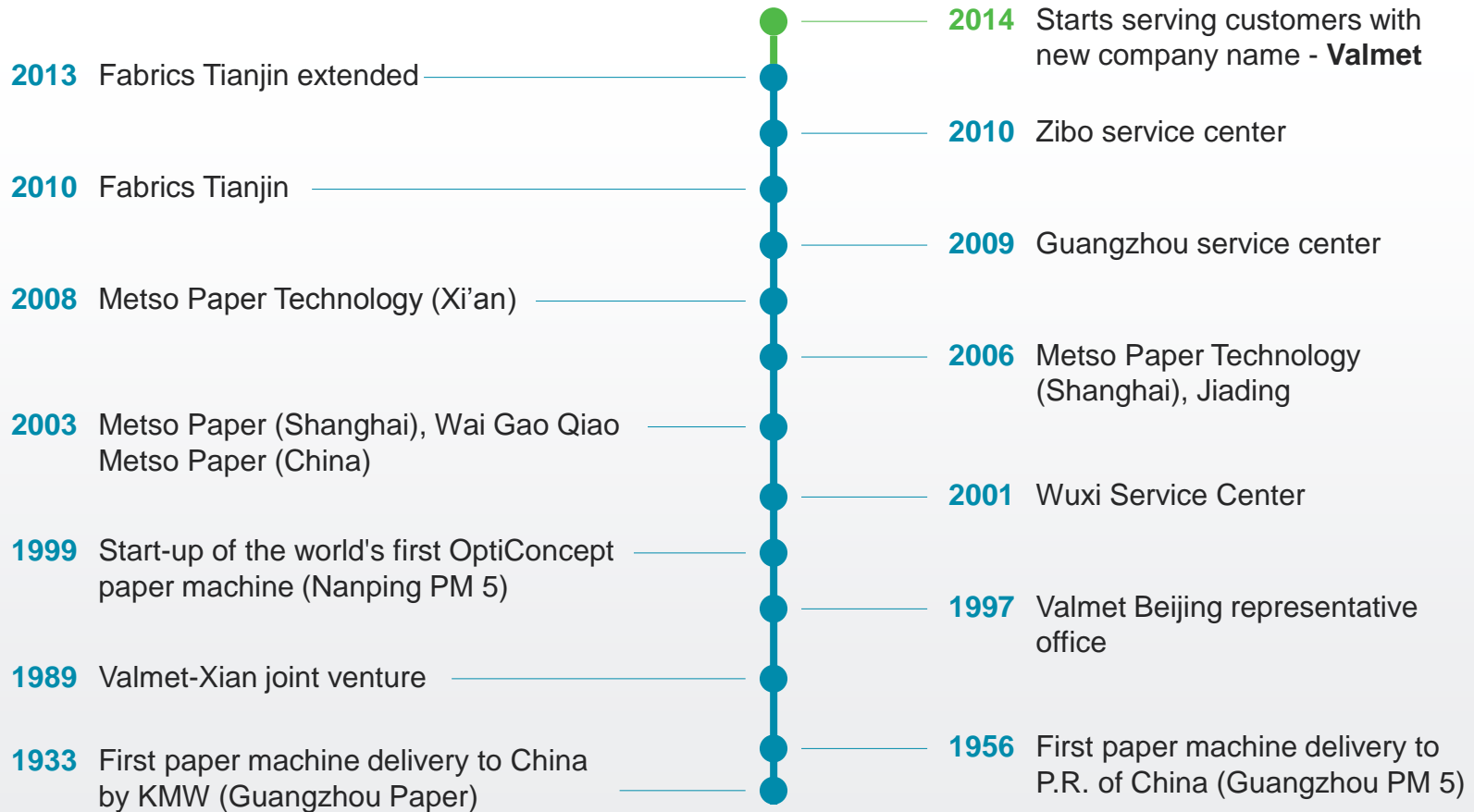
# Valmet's operations in China

Serving the pulp, paper and energy industries

- ~2,000 employees serving customers through a local network of production, sales and service units
- Four production units and three service centers with the support of Valmet's global network
- Valmet's first deliveries to China were in the 1930's (by Valmet's predecessor)
- The first joint venture (Valmet Xian) was established in 1989
- In 2013, China was Valmet's largest single country in terms of net sales (EUR 389 million)



# Valmet's milestones in China



# Local presence in China



- Factories**
- Jiading factory
  - Xi'an factory
  - Waigaoqiao factory
  - Fabrics Tianjin

- Service centers**
- Wuxi service center
  - Guangzhou service center
  - Zibo service center

- Office**
- Beijing

# Strong regional customer base across China

Serving pulp, paper and energy customers



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# Market position and drivers

# Market drivers

## Services >

- Growth supported by significant amount of new capacity being installed in during the last 15 years and the installed base is aging

## Pulp >

- Increasing standard of living in Asia driving demand for paper, board and tissue based products, expected to increase the demand for fiber
- Demand for paper, board and tissue is growing fastest in Asia, especially China and India, which do not have sufficient indigenous fiber resources

## Paper >

- Emerging markets, e.g. China, expected to drive containerboard demand
- Higher product penetration together with improved product quality drive tissue consumption e.g. in China

# RISI Annual review 2014

Thousand tonnes	Production				Apparent consumption			
	2012	Change	2013	Change	2012	Change	2013	Change
Paper and Board	101,522	3.4%	104,691	3.1%	99,393	2.8%	101,357	2.0%
Newsprint	3,800	-2.6%	3,600	-5.3%	3,931	0.8%	3,624	-7.8%
Printing & Writing	25,570	3.4%	26,092	2.0%	23,081	1.6%	23,316	1.0%
Packaging Paper and Board	59,571	4.3%	61,841	3.8%	60,582	3.8%	62,319	2.9%
Tissue	6,273	10.0%	6,808	8.5%	5,724	9.0%	6,110	6.7%
Other Paper and Board	6,308	-5.8%	6,350	0.7%	6,075	-6.4%	5,988	-1.4%

Thousand tonnes	Production				Utilization			
	2012	Change	2013	Change	2012	Change	2013	Change
Total Wood Pulp	8,008	-2.7%	9,494	18.6%	22,794	6.4%	24,453	7.3%
Recovered Paper	44,668	3.1%	45,435	1.7%	74,447	5.4%	74,484	0.0%
Nonwood Pulp	10,000	-11.6%	7,610	-23.9%	10,000	-11.6%	7,610	-23.9%

# Estimated production and consumption

Thousand metric tonnes	Production			Consumption		
	2014	2015	Change	2014	2015	Change
Paper and Board	108,444	112,441	3.7%	104,329	107,427	3.0%
Newsprint	3,401	3,257	-4.2%	3,335	3,221	-3.4%
Printing & Writing	26,368	26,988	2.4%	23,710	24,285	2.4%
Tissue	7,348	7,989	8.7%	6,533	6,984	6.9%
Containerboard	43,361	44,470	2.6%	43,981	45,071	2.5%
Cartonboard & Other Paperboard	16,590	18,039	8.7%	15,618	16,407	5.0%
Wrapping Paper Production	4,909	5,038	2.6%	5,060	5,195	2.7%
Other Paper & Board Production	6,468	6,661	3.0%	6,091	6,264	2.8%

# Development of paper industry in China

- Long-term trends
  - Production and consumption will grow, but growth rate will be slower
  - Competition will be tougher, winners and losers expected
  - Industry integration and elimination of out of date capacity will continue
  - Paper and board export can grow, but fiber including virgin fiber and recycled fiber import will increase
  - Policy and management on energy saving and pollution control will be strengthened
- 2014 market perspective
  - Still restructuring and rebalancing, but recovering
    - Container board investments continue (mainly mid-size machines)
    - Some cartonboard investments still planned
    - Tissue investments will likely recover 2015-2016.
    - Special paper grades investments are currently more active
    - Some grade conversion rebuilds and new paper machines planned in 2015.
    - Some investments on paper grades like cut size woodfree
    - Rebuilds for grade conversions



# Customers' competition and investment

- Customers' competition

- Paper industry competition is hard and currently has low profitability

- Centralization by 3-4 players covering 70% capacity will be likely formed by acquisition or mergers, but it will take time.
- Some changes in strategies can be seen.
- Increasing cost from labor, electricity, water, fiber resources will speed up the small paper makers disappearing
- Government is driving the elimination of the small size mills

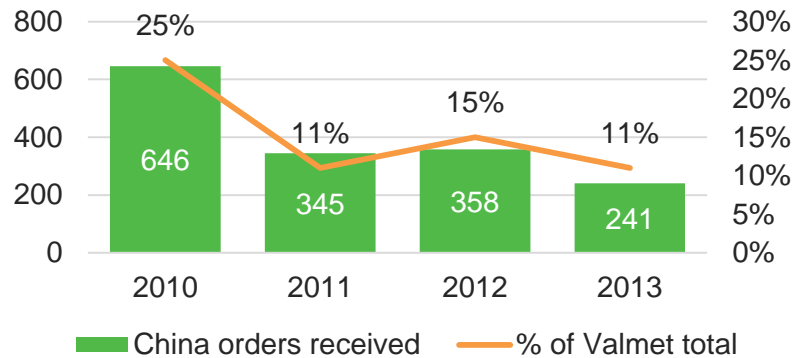
- Customers' investment

- Investment slow

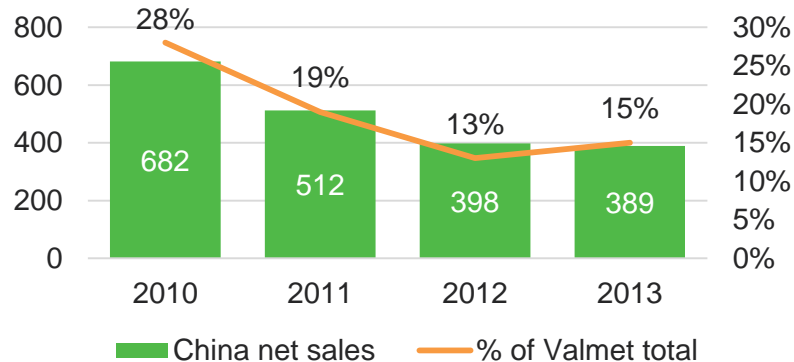
- Cost of financing is high
- Government controls license for new investment
- Major players are balancing the capacity
- Slowdown of GDP growth and export
- Overcapacity in certain grades

# Development of net sales and orders received

## Orders received



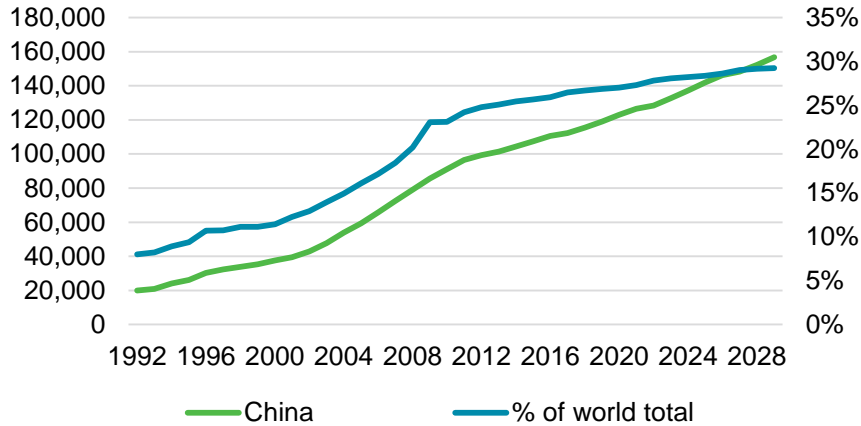
## Net sales



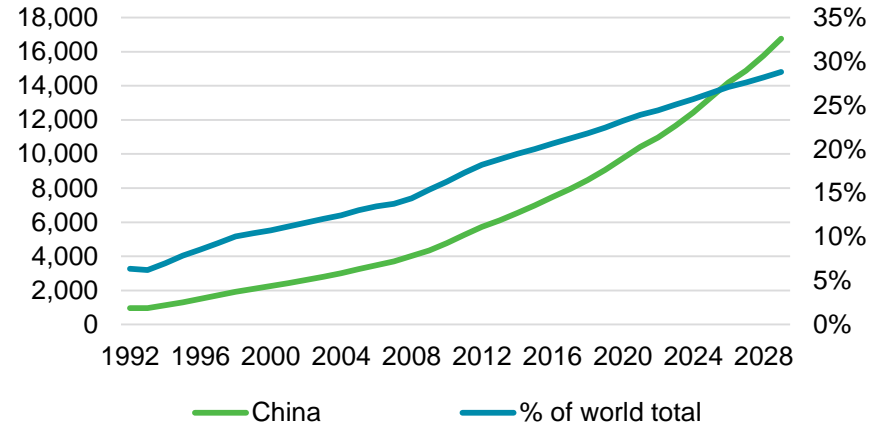
- Orders received and net sales have decreased since the record years following the financial crisis
  - Record order intake and net sales years just after financial crisis
  - Strong stimulus-driven investments led to overcapacity in most paper grades (like in many industries in China)
  - Printing and writing paper consumption has been impacted by digital media
  - Lower growth in packaging board consumption led by slowing economy

# Consumption in China

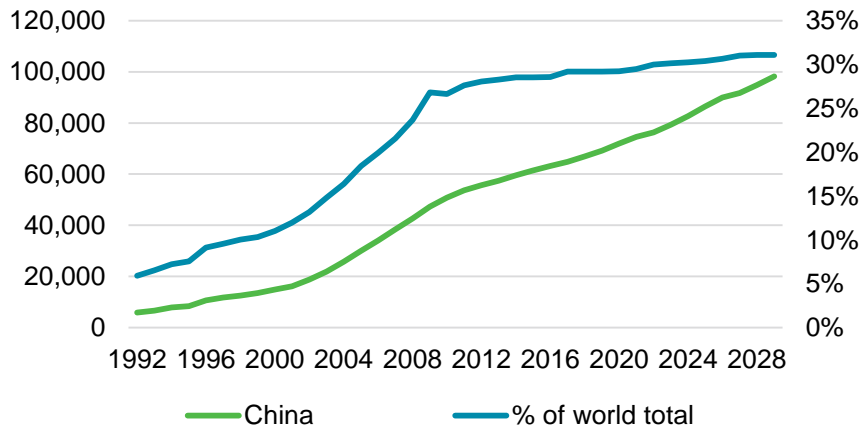
## Board and paper



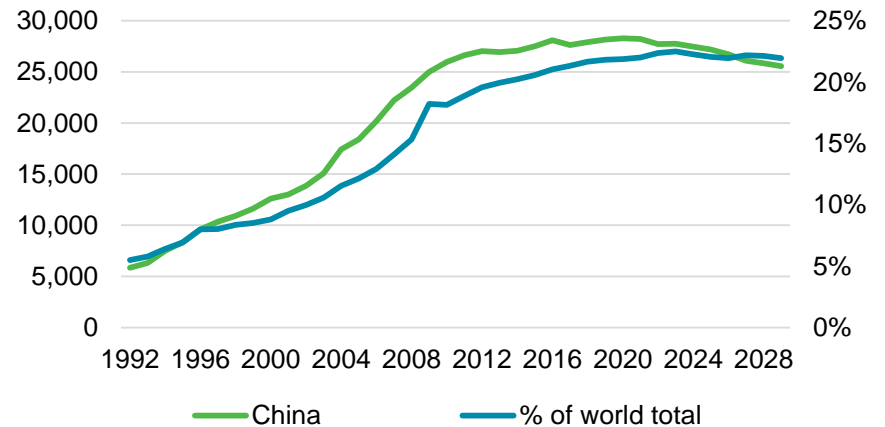
## Tissue



## Board



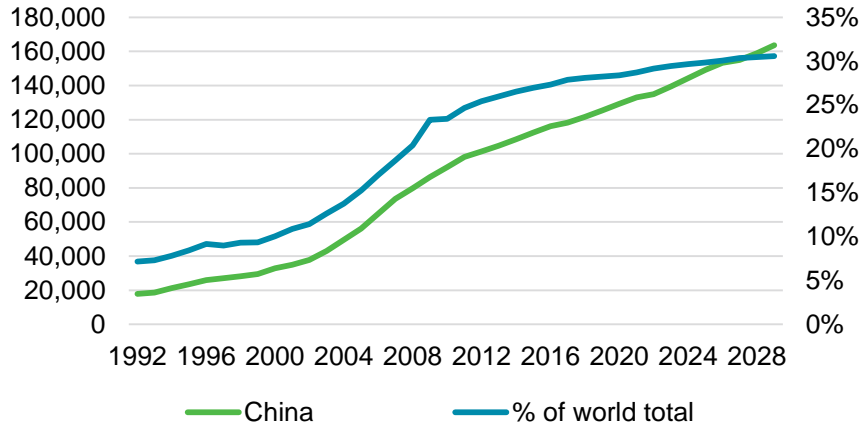
## Printing & writing and newsprint



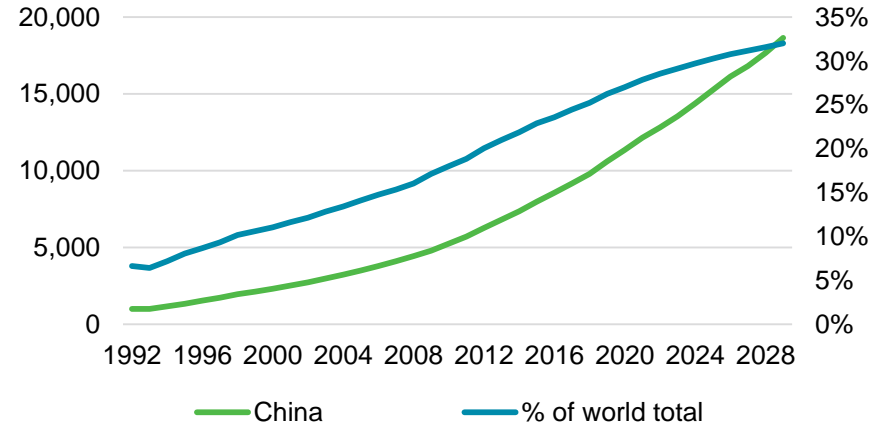


# Production in China

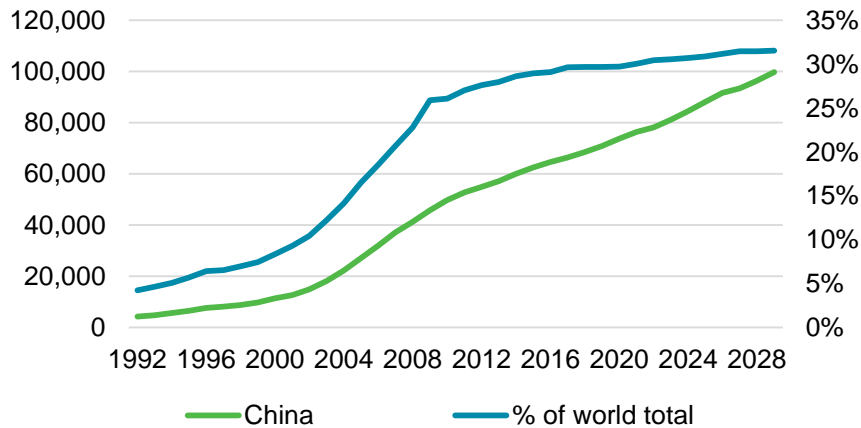
## Board and paper



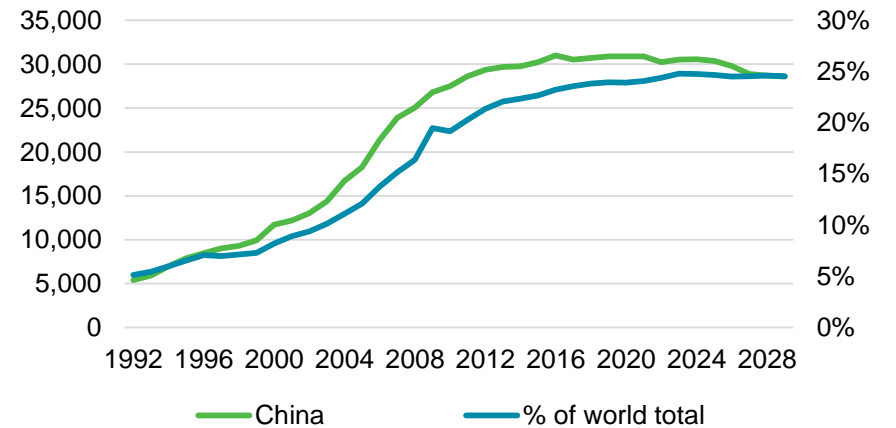
## Tissue



## Board



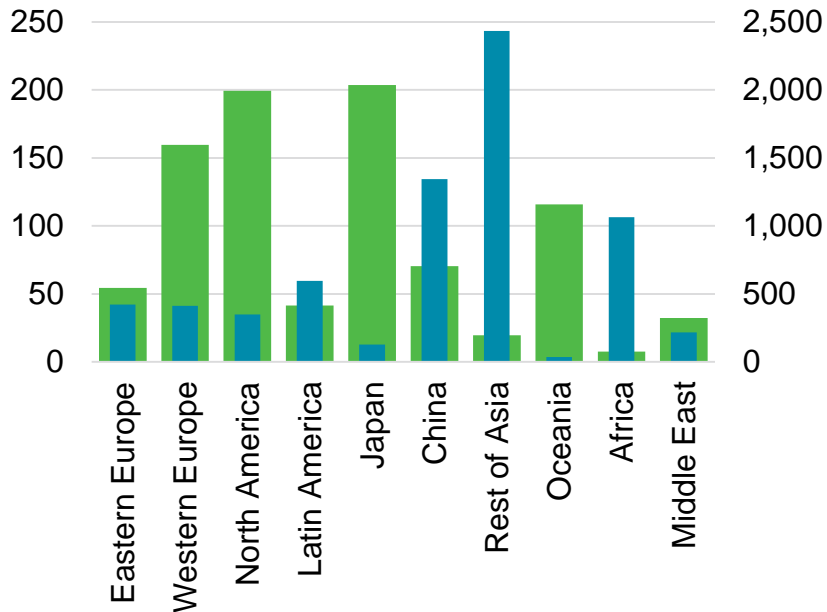
## Printing & writing and newsprint



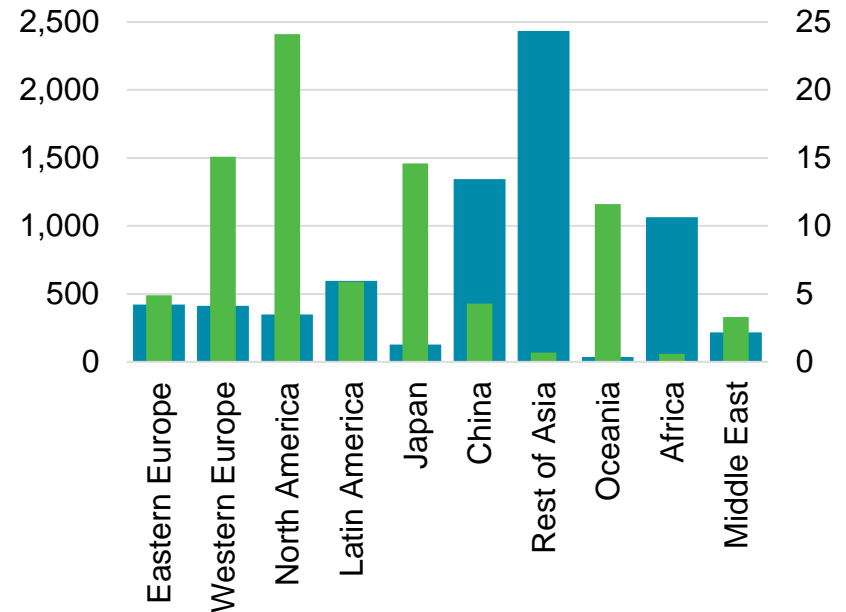
# Consumption per capita

Chinese consumption far away from the level in the Western world

Paper and board consumption per capita vs. population<sup>1</sup>



Tissue consumption per capita vs. population<sup>1</sup>



■ Consumption per capita, kg (LHS) ■ Population, million (RHS)

■ Population, million (LHS) ■ Consumption per capita, kg (RHS)

Consumption in North America: 199 kg per capita  
Consumption in China: 70 kg per capita

Consumption in North America: 24 kg per capita  
Consumption in China: 4 kg per capita

1) Source: PPI Annual Review 2013 (2012 figures)

# Changes in the market environment

## Market environment

- Growth opportunities in services, market growth mainly in services
- Fiber market will remain about the same level as today
- Bioenergy market is expected to grow fast, but not in focus now.
- Paper market flat, investment mainly on mid-size board grades with occasional large machines

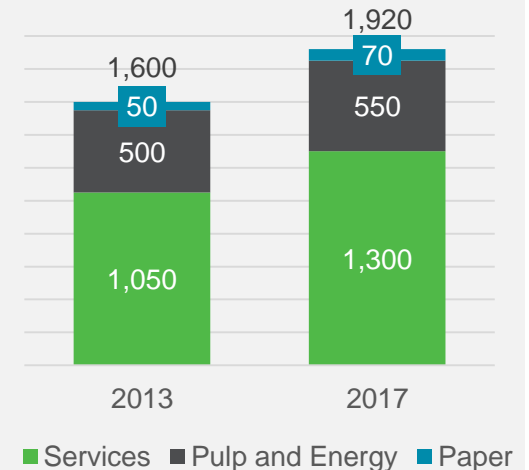
## Customers

- Profitability lower by slower market growth and overcapacity
- OPEX is the main concern currently
- More cost and investments on environmental issues
- Bio-based power generators are struggling with many uncertain drivers

## Effects to us

- Weaker capital market, focus more on mid-size segment, key components and rebuilds
  - => Increasing competition in mid-size segment with smaller international and local competitors
  - => Further development of local capability, utilize capacity for global deliveries
- Services business having more local and international competitors
  - => Development of combined offering like agreements and process competence
  - => Development of local presence close to customer

**Target market size**  
(EUR million)



# Signs of improvement on the market conditions

- Signs of improvement

- Several board makers are planning new project investments
  - Traditional players start the investments again
    - Sun Paper, Bohui, LCPC, JiAn, ChenMing etc.
- Several projects come to final negotiation
- Investment not only focus on tissue, also in board machines and fiber lines

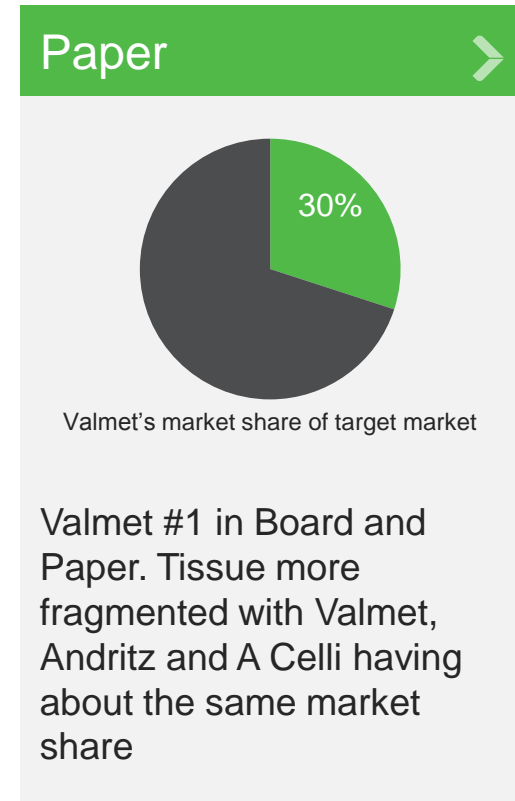
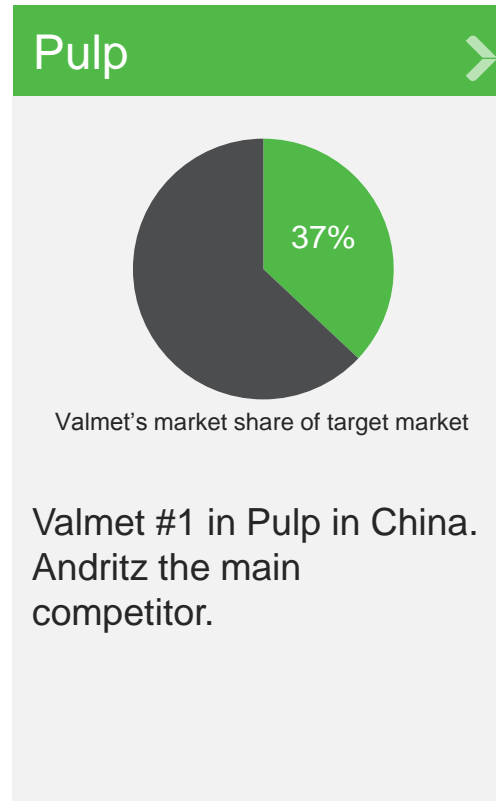
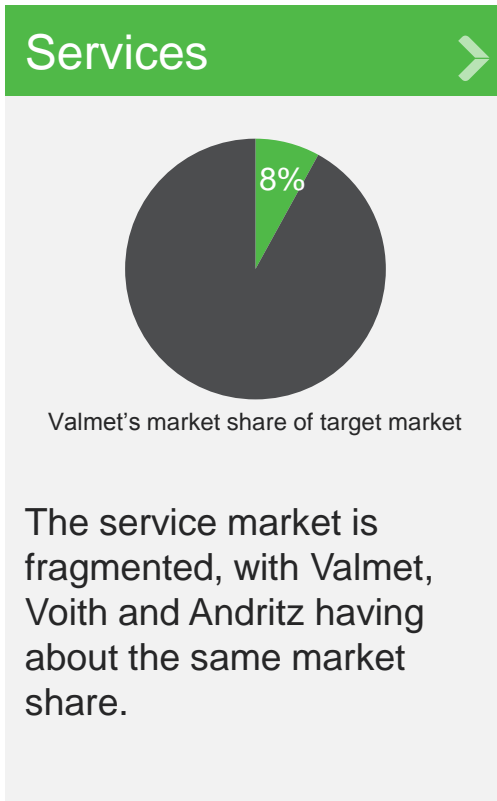
- Investment drivers

- Internet business drive the big growth for container box, more production for liner and fluting
  - Light weight fluting an area for new investment
  - White top liner demand is growing, driven by better printability
- Special grade such as Glassin paper, release paper, decoration paper, etc driven by current low market level
- Tissue investment is driven by growing living standard and urbanization
- Carton board investment is driven by China market cost competitiveness, export



# Main competitors

# Valmet's market position in China



# Competitors

## Number of competitors in all business segments

### Service business

- Voith Paper
- Andritz Pulp & Paper
- Number of suppliers strong in selected products / technology, like AFT for baskets, BTG for doctor etc.
- Numbers of maintenance suppliers, like PMT, UP-Tech, Refine etc.
- Numbers of paper machine clothing suppliers like Albany, Xerium,

- Global 1<sup>st</sup> tier competitors expand local presence
- Global 2<sup>nd</sup> tier competitors finding cooperation with local suppliers for new installations and actively competing with key components
- Local competitors are seeking technology development and expanding to Asia market

### Pulp & Energy business

#### Pulp mill competitor

- Andritz Pulp & Paper
- GL&V
- Wenrui Machinery
- Fujian Sanming Paper Machinery
- Other local suppliers
- Huaji Group

#### Energy competitor

- Wuhan Boiler
- Western Power
- Hangzhou boiler
- Wuxi boiler
- Jinan boiler
- Chempolis
- Dong Energy

### Paper business

#### Paper & board

- Voith Paper
- Andritz Pulp & Paper
- Yueli Machinery
- China Paper Machinery Corporation (CPMC)
- Number of local suppliers
- Kadant BC

#### Tissue

- Voith Paper
- Andritz Pulp & Paper
- A Celli
- Toscotec
- Kawano Zoki

#### Key components

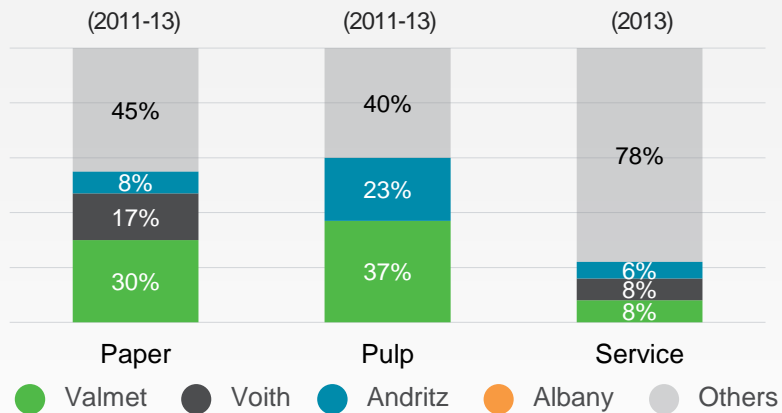
- PMP, PMT, ABK, GapCon, GL&V and others

# Market share

Competition expected to remain tough, localization critical

## Currently weak market and growing competition

Market share by business (%)



Shrinking market with tougher competition from global and local supplier

Local competitors have been growing in mid-size pulp lines

Increased local competition, SER business more cost driven



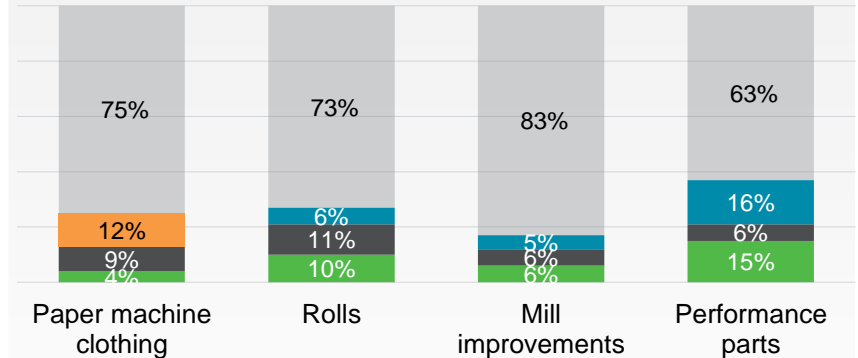
中国造纸装备有限公司  
CHINA PAPER MACHINERY CORPORATION



SYPM-FJ

## Services competition is fragmented

Market share by SER segment (%)



### Ranking by market share:

1. Albany
2. Voith
3. Valmet

1. Voith
2. Valmet
3. StoweWood

1. Voith
2. Valmet
3. Andritz

1. Andritz
2. Valmet
3. BTG



Many local suppliers providing specific MIL services







# Strategy and competitive edges

# We achieve our strategic targets through the implementation of must-wins

## The Facts

- Valmet has established strong position in pulp and paper industry
- Market has changed
  - CAP business has shifted from fast growth with large installation to flat with mainly mid-size board grades
  - Service market is expected to grow but impacted by customer profitability
- Our customers are facing difficulties with weak demand in paper and overcapacity on many grades
- Competitors
  - Global competitors strengthen their local presence
  - Local suppliers are growing with mid-size capability
  - Cost competitiveness is getting more critical

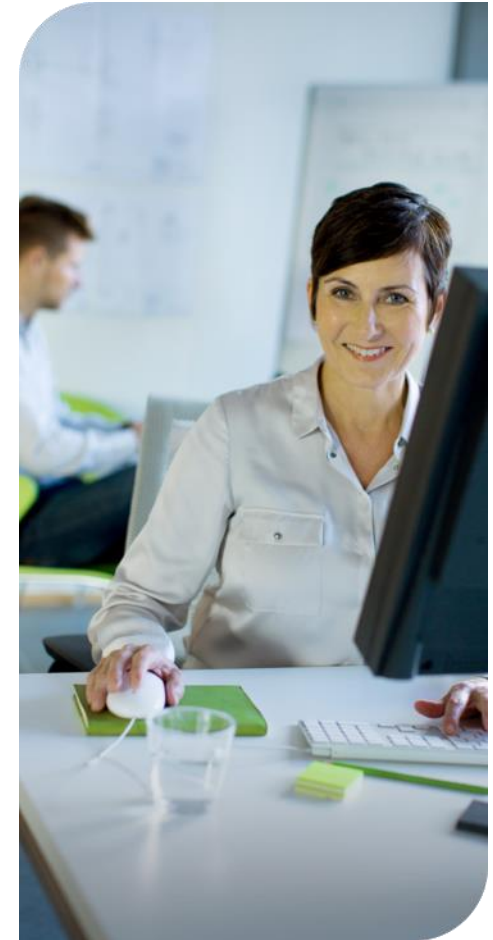
## Our Way Forward

- Maintain our leading market position in CAP business and SER business growth
- Market penetration of modularized technology with cost competitiveness and leading technologies
- Continuous development of process know-how, bundling service business
- Strengthening key account and reference management
- Improving cost competitiveness through productivity development and capacity cost optimization
- Competence development to support business targets

# Valmet's competitive edges

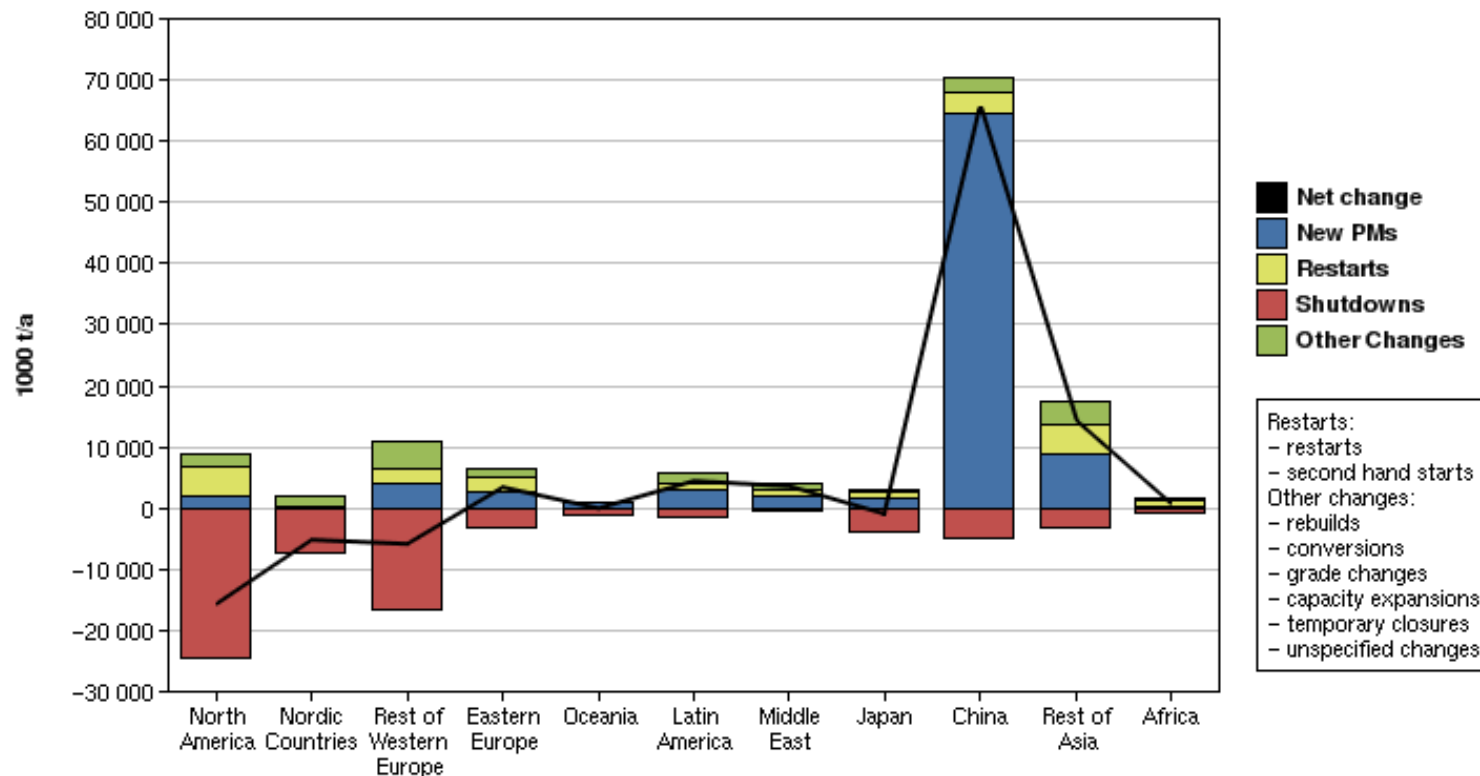
Why has Valmet premium pricing?

- Value of our technology and engineering
- Value of our quality of manufacturing
- Value of our smooth start-up
- Value of our services



# Major part of paper and board investments have been done in China

Paper and board capacity changes 2006-2014:III, By region and change reason, 1,000 t/a



Source: Poyry Management Consulting

Data update: 27-AUG-2014

# Capitalizing the service potential

Installed base



Large installed base providing good opportunity to increase services.

Key Account Management



Strengthen Key Account Management to improve contribution from key accounts.

Agreement-based business



Continue to develop agreement-based business.

Cost competitiveness



Cost competitiveness to improve customer OPEX and to beat low cost supplier.

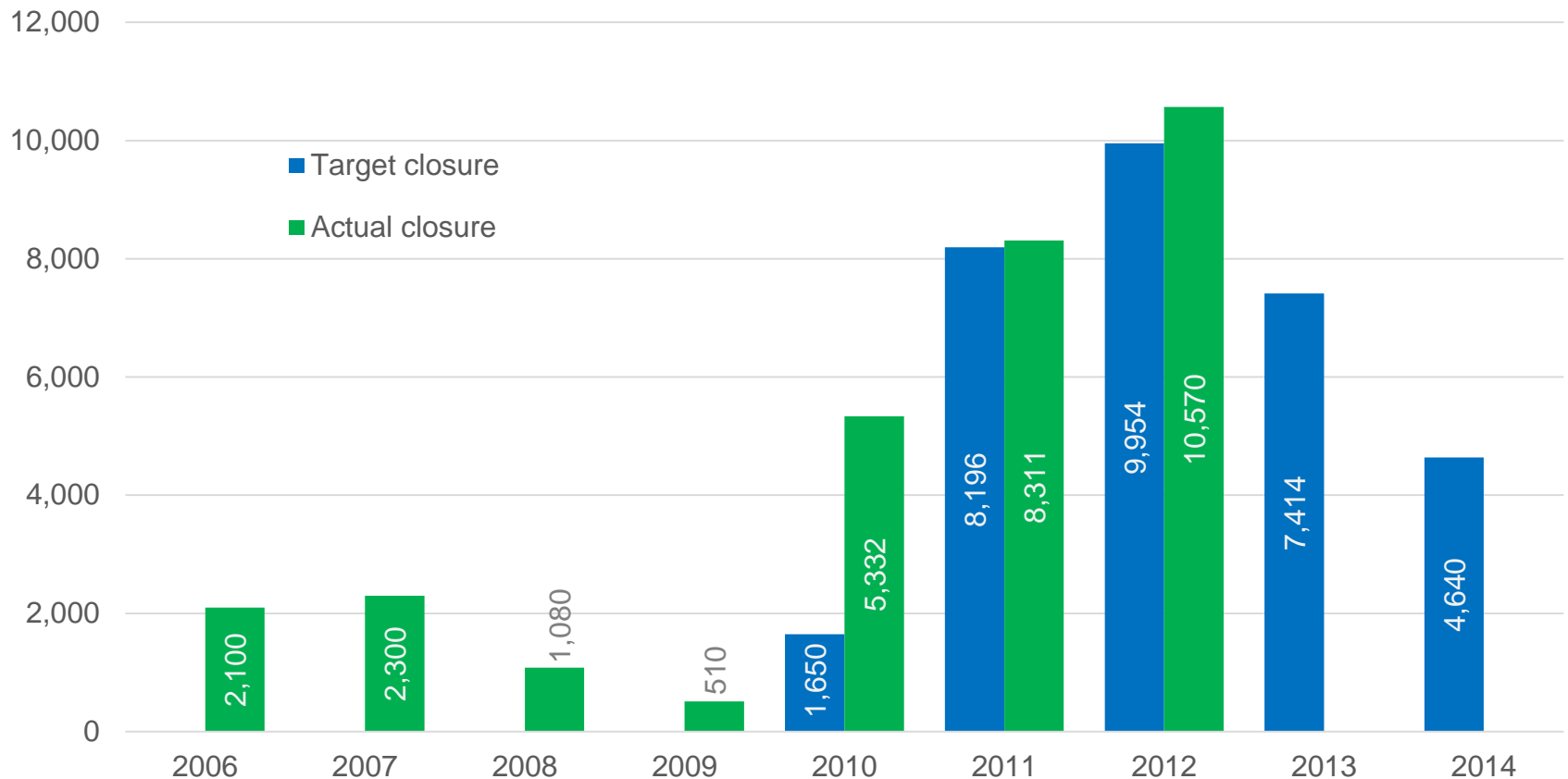
Spearhead products



Introduce spearhead products to market.

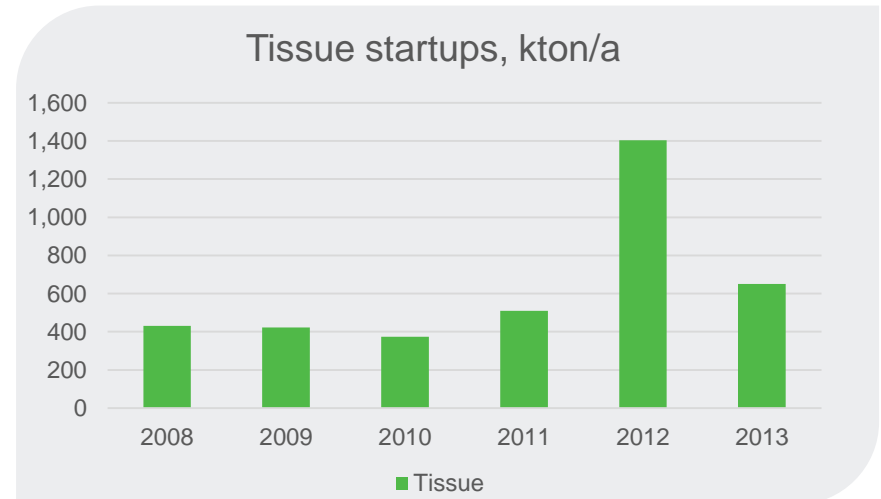
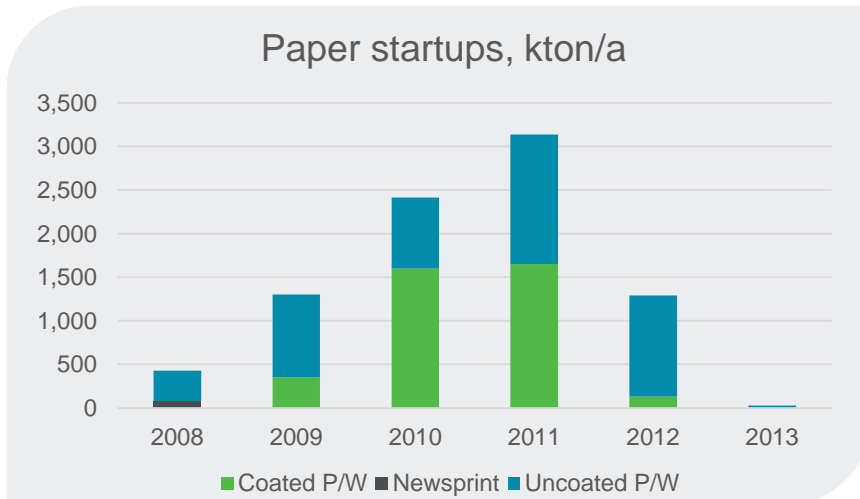
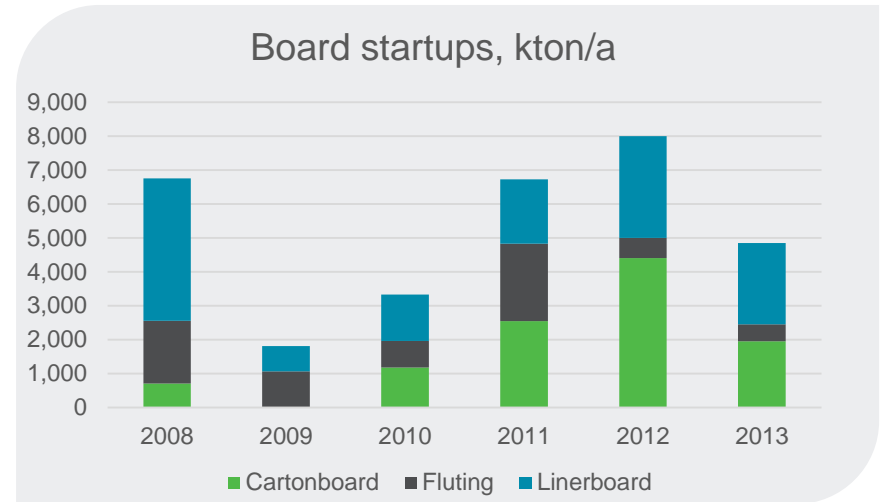
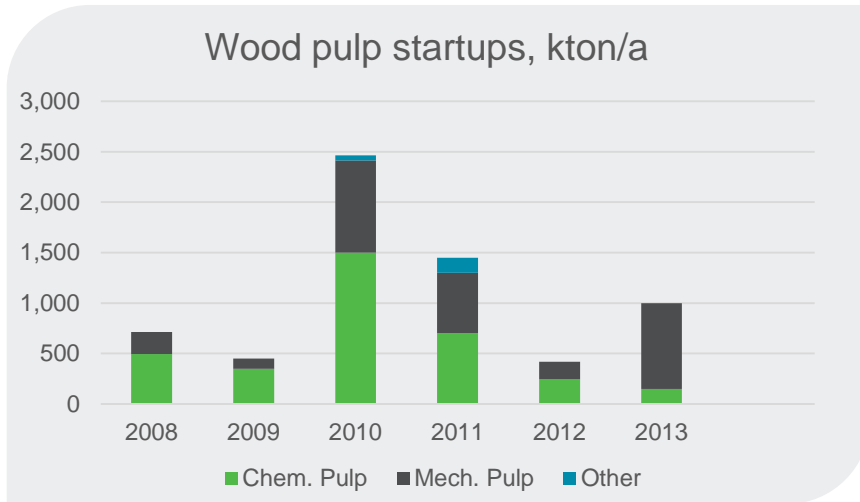
# Old facility closure in pulp and paper industry

Closure accelerate from 2010



# Total new installations by startup year

Overcapacity in coated boards, tissue and coated fine papers



# How to improve profitability in China?

## Competitive cost of raw materials and other procurement

- China is still competitive sourcing area
- Increase the share of subcontracting and reduce own capacity cost
- Localize component sourcing further

## Manufacturing efficiency and WTO

- Further optimize capacity cost
- Basic productivity development
- Modular manufacturing
- Implement Lean
- Increase the share of local engineering and project operations
- Continue to reduce quality cost





# Summary

# Summary

- China is the largest single country for Valmet based on sales in 2013
- The installed base is young and the service culture yet underdeveloped, which offers good possibilities to grow in services
- Board and tissue consumption is growing
  - Supported by megatrends
  - Overcapacity still impacting market in short-term





# Appendix: References in China

# Achievements in China

## New orders in 2014

- **Stora Enso Tiger**
  - Liquid Package Board Project, 450,000t/y
  - Chemi-mechanical pulp production line
- **Nine Dragons**
  - Liner board project, 400,000 ton/y
  - Complete paper machine from headbox to Winder
- **Lee & Man**
  - Toilet and Facial tissue project, 60,000 ton/y
  - Advantage DCT 200HS tissue line with Stock preparation system
- **Confidential**
  - Fluting project, 300,000 ton/y
  - Key sections of the paper machine
- **Others**
  - Tangshan Guotai Paper: 6 pcs Headboxes
  - Sun Paper: Stock preparation and winder
  - UPM Changshu: 8 pcs Refiners
  - Fiber board customers: 5 pcs Defiberators
  - Several Relocation/rebuild orders



# Achievements in China

## New start-ups in 2014

- Anhui Shanying Paper, PM5 and PM6
  - PM5: container board, multifourdrinier machine, 1,200 m/min
  - PM6: fluting, Gapformer machine, 1,600 m/min, 1,540 ton/d
- Confidential
  - Folding box board (Ivory), 1,400 m/min, 2,394 ton/d
- Lee & Man, Vantage Dragon, PM20
  - Container board, Testliner, 1,100m/min, 1,060 ton/d
- Zhejiang Jingxing Paper, BM16
  - Fluting, 1,100 m/min, 880 ton/d
- Oji Nantong
  - Complete pulp mill with recovery island and lime kiln
  - 700,000 adt/year of bleached hardwood pulp
- Yun-Jing Forestry and Pulp Mill, TM1
  - Advantage DCT100+ tissue machine, 135ton/d



# Achievements in China

## New developments in 2014

### Production capacity

- New SPR workshop opened in Jiading, Shanghai on 28<sup>th</sup> of October, 2014
- Valmet cleaning doctor blade production line inauguration on November 18, 2014 in WaiGaoQiao, Shanghai



### Service capacity

- 5,000<sup>th</sup> roll delivery from Wuxi service center in October.
- New PU workshop start-up in Guangzhou service center at the beginning of November.



# OptiConcept M well accepted by market in China and Asia-Pacific

## OptiConcept M containerboard line for Siam Kraft Industry, Ratchaburi, Thailand

- Start-up in 2014
- Annual capacity 300,000 ton of recycled fluting

## OptiConcept M containerboard line for Lee & Man, China

- Start-up in 2014
- Annual capacity 350,000 tone of container board

## OptiConcept M containerboard line for Zhejiang Jingxing Paper, China

- Start-up in 2014
- Annual capacity 300,000 ton fluting

## Confidential

- Fluting project, 300,000 ton/y
- Key sections of the paper machine
- Start-up in 2015

## World's first OptiConcept M fluting line for Fujian Liansheng PM6

- Start up Dec 12, 2012
- Annual capacity, 300,000 ton
- "It took less than 3 hours in total from having stock on the machine to get the saleable paper on the reel"



# References:

## Paper, Board and Tissue Production

- **Fujian Liansheng PM5**, state of the art linerboard machine with world's first OptiFlo Fourdrinier Layering headbox
- **Fujian Liansheng PM6**, world's first OptiConcept M paper machine. "It took less than 3 hours in total from having stock on the machine to get the saleable paper on the reel", comments the customer
- **Zhanjiang Chenming PM1**, Guangdong, world's largest and fastest WFU machine , record speed
- **Wuhan ChenmingTM1**, the new Advantage DCT 200HS tissue line started up ten days before the estimated time.
- **Xiamen Xinyang** record fast start-up of new Advantage DCT200 tissue machine that reached guaranteed production speed within 9 days
- **Nine Dragons PM30**, fast hybrid former micro-fluting machine, 400,000 tons per year
- **Zhejiang Ji'An PM3**, world's fastest coated linerboard machine, equipped with OptiLayer curtain coater, design speed 1,200 m/min.
- **IP Sun Paper BM26**, 550,000 t/a Folding Box Board / art board machine

### HengAn (China) TM10

Advantage DCT 200 tissue machine with ViscoNip shoe press, speed record of 2000m/min

In 2013, HengAn ordered four more Advantage DCT 200 tissue machines from Valmet



Case



# References: Pulp Production Processes

- **Shandong Chenming**, world's highest-yield BCTMP line
- **Shandong Bohui**, repeated orders for BCTMP line, biggest mechanical fiber producer in China
- **Shandong Chenming**, complete wood-handling system, features a new GentleBarking system
- **Shandong Chenming**, world's largest deinking pulping line, daily production 1,500 tons
- **Fujian Qingshan**, China's first pre-hydrolysis dissolving pulp line

## Asia Symbol (Shandong)

World's largest Kraft pulp chemical pulping plant, Shandong Rizhao 4,800 adt/day

Asia Symbol (Shandong) , one of the world's largest recovery boiler firing 7,600 tds/day, The design capacity is 6,500 tds/day with Euca and 7,000 tds/day with Acacia



# Gigantic Cartonboard Machine

Producing folding boxboard and art board grades

- Grades – folding boxboard and art board
- Design speed - 950 m/min
- Wire width – 6,850 mm
- Basis weight - 170 to 350 g/m<sup>2</sup>
- Capacity - 550,000 tpy

Shandong IP & Sun PM 26,  
China  
Board Mill

Case

The PM 26 startup was excellent: Three weeks after start-up, the production exceeded the design capacity, and in five weeks, the machine reached its design speed.



# Efficient Board Making with OptiConcept M

Producing high-quality containerboard using fewer resources

- Cost-efficient, high-quality, safe and flexible board making concept
  - 100% recycled lightweight fluting
  - Annual capacity 300,000 tonnes
- High productivity with low operating costs

Liansheng Paper PM 6, China  
Board Mill

Case



40% less hall space required  
40% less installation working  
hours compared with conventional  
project

# Optimization of Raw Material Costs

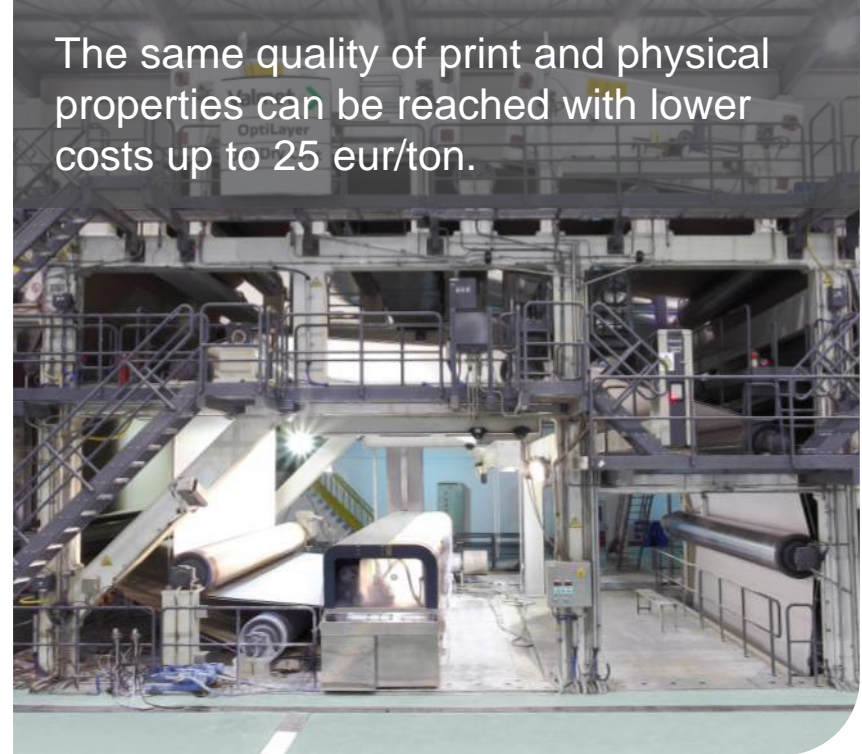
Multilayer curtain coating reduces the use of bleached virgin pulp

- Base paper sheet is covered by engineered multilayer coating structure that follows the contour of the sheet perfectly
  - The method provides superb coverage and opacity, allowing use of recycled base sheet instead of the conventional bleached pulp structure

Zhejiang Ji'an PM 3, China  
Board Mill

Case

The same quality of print and physical properties can be reached with lower costs up to 25 eur/ton.

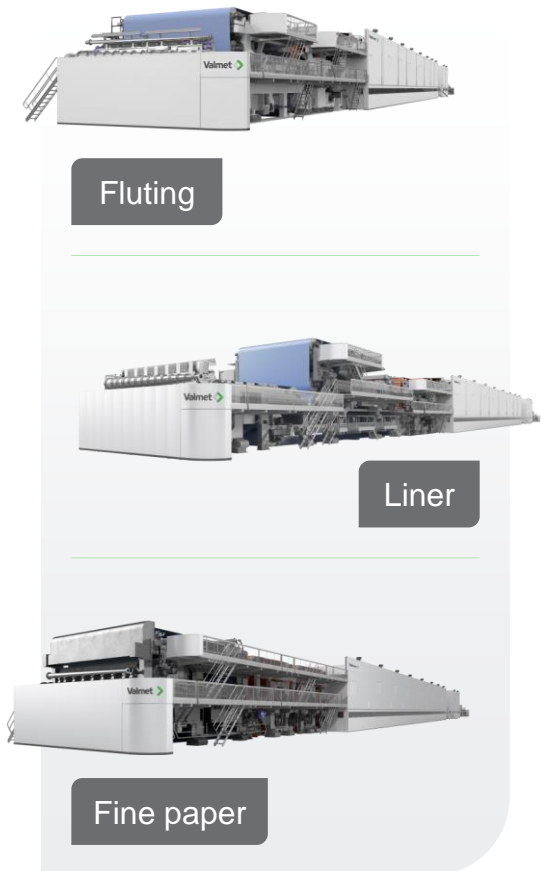


# OptiConcept M: Cost-efficient Paper Making Line

Several customers have already chosen OptiConcept M

- The OptiConcept M family suits both containerboard grades and fine paper production
  - simple, well-functioning solutions that meet our customers' needs
- Valmet has already sold five OptiConcept M production lines (as of February 2014).
- The first line, Liansheng Paper PM 6, started up in China in December 2012.

➤ “The most beneficial part of this new concept is the low consumption of water, electricity and steam,” says Xue Rong Jun, project manager at Liansheng Paper.



# Leading Tissue Technology for Best Performance

## Highlights 2013

### Orders from China

- Yunnan YunJing Forestry and Pulp Mill, Advantage DCT 100+ tissue line with Advantage ViscoNip press

### Start up in China

- Wuhan Chenming Hanyang Paper, Advantage DCT 200+

### Valmet Tissue global

- More than 200 tissue machine references
- 20 production lines equipped with Advantage ViscoNip press
- 650 pcs successful Yankee dryer deliveries
- 20 references in China market and 8 on the way to be installed
- Advantage NTT
  - First Advantage NTT tissue line started up in Mexico 2013
  - Second line to start-up in Chile, 2014
  - Third line to start-up in Abu Dhabi 2015



# Repeated Success: Advantage DCT Tissue Lines

## Latest repeat orders

### HengAn Group China

8 Advantage DCT 200 machines

- 3 pcs. Shandong Hengan Paper, Weifang, start-up 2010, 2014 and 2015
- 2 pcs. Hengan Wuhu Paper, Wuhu start-up 2014 and 2015
- Hunan Hengan Living Paper, Changde City start-up 2009
- 2 pcs. Hengan Holding, Anhui start-up 2008 and 2006

### Shanghai Oriental Champion Paper

- Advantage DCT 135, Jinshan, start-up 2012
- Advantage DCT 100, Jinshan, start-up 2011

### Fujian Hengli, Paper Industry

- Advantage DCT 100, Nanan City, start-up 2006
- Advantage DCT 200, JinJiang, start-up 2006

### Gold Door

Advantage DCT 60

- 2 pcs. Advantage DCT 60, Huizhou, Start-up 2009

### Outstanding start-up

1,900 m/min within 9 days.

Xiamen Sinyang, Advantage DCT 200 with Advantage ViscoNip press



# Pulp and Energy: Latest Orders in China

## CTMP lines

- Bohui Dafeng , two lines 1,500 adt/d, June 2013

## FBO Defibrators

- Furen MDF, 750cbm/d, Jan 2014
- Baishida, 600cbm/d, Jan 2014

## Chemical pulping line

- Oji Nantong, complete pulp mill
  - 700,000 tonnes of bleached hardwood pulp annually.
  - Start up in 2014

## Rebuilds

- APP JinHai mill, Mill wide NCG upgrade
  - Zero emission target
  - Start up in 2014





# Services: Latest Investments and Development

## Service center expanded in Tianjin, China

- Manufacturing of forming, dryer and filter fabrics
- All Valmet fabrics production in China now concentrated to Tianjin

## TwinRoll Press Roll services in China

- Maintenance in Zibo center
  - Valmet has delivered close to 100 pcs TwinRoll Press in China
  - Valmet's TwinRoll TM Press "Roll exchange service"

## TwinRoll Press Roll Replacement service

- Benefits to customer:
  - No need for investing a spare roll, saving costs
  - Reliable; Better availability; Site services

## Shanghai Waigaoqiao new doctor blade manufacture

starting operation in July 2014

## New PU roll cover product line in Guangzhou service center

starting operation in October 2014

## New grinding capacity started in Zibo service center in Q1/2015



# Optimization of Dryer Section Ventilation Reduces Electricity Consumption by 500KW

- The target of the project was to reduce the energy consumption of the 10.2 meter wide newsprint machine
- Valmet upgraded 36 blow boxes with new designs which enable a new way of running the whole ventilation system saving both electric and thermal energy

Guangzhou Paper Co., LTD,  
PM9  
Guangdong Province, China

Case



“All actions and ideas to reduce costs are important and worth consideration. The result and cooperation in this project were so good that we are encouraged to continue in order to find more opportunities for similar achievements,”

Zhou Yun, Executive Vice GM of GuangZhou Paper.

# Advanced DryOnyx H Recoating Technology Helps Customer Improve Paper Quality

- The target was
  - To reduce break time
  - To improve end product quality
  - To solve the stick problem and decrease fluff on the paper
- The release properties are clearly improved
- Cleaning time is shorter than before as fluff has decreased a lot
- Excellent doctoring
- Superior corrosion resistance

International Paper &  
Sun Cartonboard Co., Ltd.  
Shandong province, China

Case



“The surface of the cylinder is much cleaner than before, the product quality is improved thanks to the smooth surface after coating and better doctoring,”

Mr. Han, PM22 Mill Manager (on the right).



# Roll Grinding Cooperation Agreement

Lee&Man Paper, Guangdong

- Agreement principles
  - Lee & Man owns the machinery and workshop
  - Valmet provides operators and grinding technology
  - Valmet handles cover condition follow-up and reporting
- Agreement drivers
  - Securing the success of grinder investment and smooth start-up
  - OEM grinding know-how available on-site
  - Fewer roll-related issues on machines
- Agreement expanded to Lee & Man Jiangsu in 2014
- Same scope Agreement for Lee&Man Chongqing on going

Lee & Man Guangdong,  
China

Case

"With Valmet we can secure our investment and the consistently high quality of grinding operations."

Carson Chan  
Project Manager



# Revolutionary Fine Paper Machine

With the latest technology

- Grade - woodfree uncoated
- Design speed - 2,000 m/min
- Wire width – 11,150 mm
- Basis weight - 45 to 120 g/m<sup>2</sup>
- Capacity - 600,000 tpy

Zhanjiang Chenming PM1,  
China  
Board Mill

Case

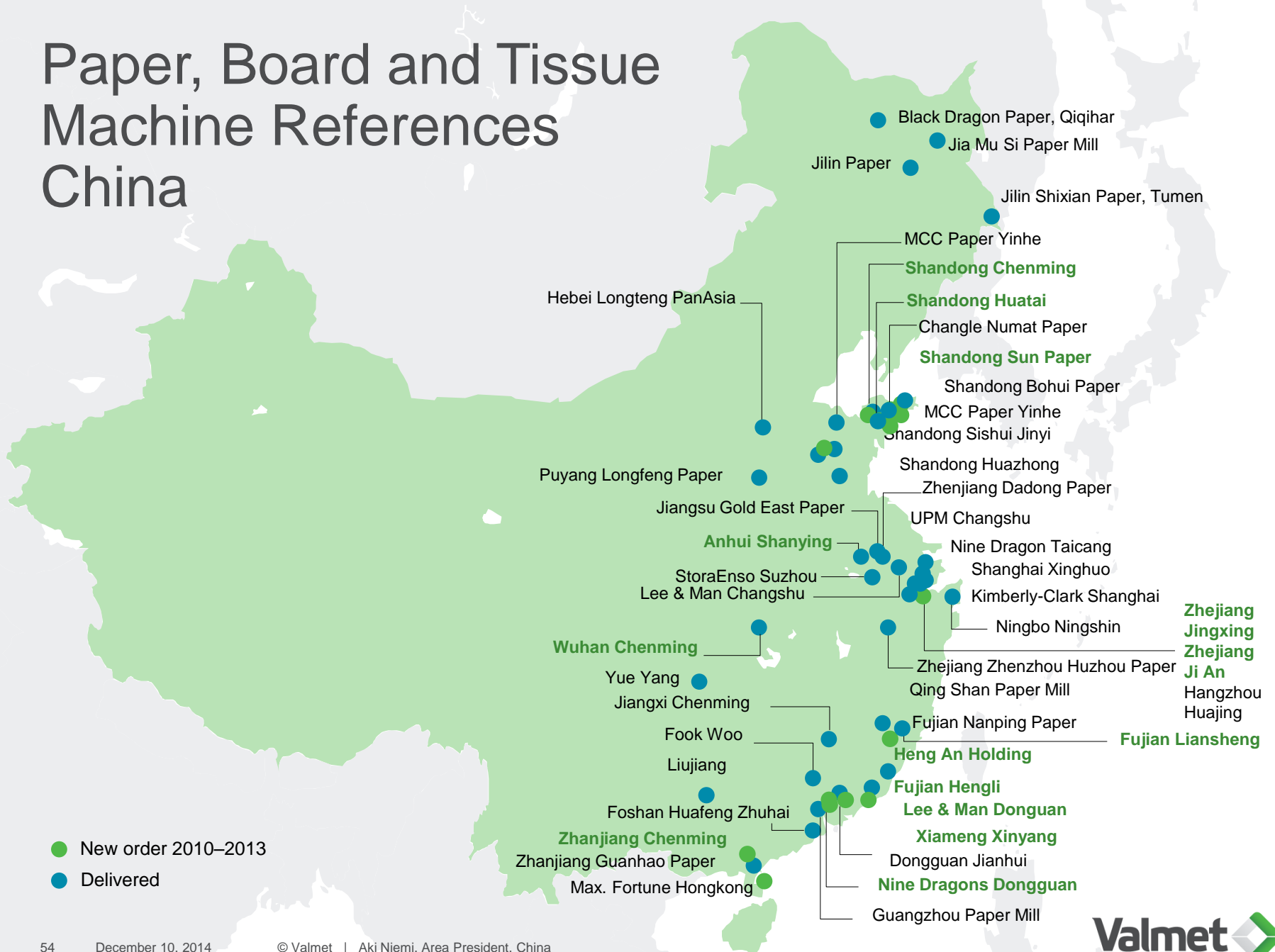
2013 The fastest PM 24-hour record



“We are very proud to have this world class paper machine, fastest in the world. With new Valmet technology we get more and better profit from the machine.”

Mr. Jia Huadong,  
PM Deputy General Manager of Zhanjiang Chenming

# Paper, Board and Tissue Machine References China



# Pulping References in China



