

The independent news provider for the global tissue business

TWM

TISSUE WORLD MAGAZINE

Groth on growth

SCA's new supremo Magnus Groth talks to TWM about the global tissue giant's business strategy

Country Report

Kazakhstan: Healthy growth and opportunities in consumer tissue
TWM interviews Karina Trading and İpek Kağıt Kazakhstan

PLUS: Technical Theme L.C. Paper: Is there a limit to environmental advancement in the tissue industry's model?

Nuqul Group: The MENA leader shows how to take control of natural resources
SPECIAL FEATURE The Barometer Issue returns to six Country Reports one year on.

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TWM visits Karina Trading's site in Almaty, Kazakhstan, for this issue's Operation Report

L.C. Paper 1881's chief executive Joan Vila discusses the potential for invention in tissue in this issue's Technical Theme: Environment

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Tissue sans frontiers

The boundaries of the tissue industry's reach across the globe are forever being pushed forward. This edition of TWM has especially emphasised the pioneering spirit that propels the search for growth.

One man who covers more notional miles than most should he check Google Maps for his company's reach is Magnus Groth. The new president and chief executive of SCA turns the clarity of the vision he demonstrates in our interview in MarketIssues across all continents.

The words 'organic growth' and 'acquisition,' although mentioned just once, are ever present.

Intercontinental

Expansion is now seeing a new feature coming ever more to prominence – intercontinental trade. It has grown faster than pancontinental trade mainly on the greater logistical practicality of transporting parent rolls.

Esko Uutela tells us in Exitissues that new export-oriented capacities built in Asia, mainly in China and Indonesia, and the MENA region, particularly in Turkey, Egypt and the United Arab Emirates, have been the main reason for the rapid increase.

Turkey's İpek Kağıt went the extra mile... a few thousands, in fact, to seek out potential. It set up in Kazakhstan in 2006 with an eye to a vast market in Central Asia and Russia. Operations director Hamdi Yazıcı tells of a doubling of capacity in our Country Report.

One of the countries within its scope is Uzbekistan with a largely untapped population of 30 million.

Tissue World Jakarta: TW first in a vital and dynamic region

Indonesia has a population of 300 million. As potential markets go this is a big one, now emerging impressively from long years of dictatorship and aiming to be the world's fifth largest economy by 2018.

That's why Tissue World is expanding there too.

We have just successfully completed the first of our two TW regional initiatives. The first ever dedicated tissue trade show in Latin America was Tissue World São Paulo, Brazil, attracting almost 70 exhibiting companies and 1,119 professionals from that continent and beyond. We include an extensive report on business in this edition.

We've also launched TW's first ever dedicated tissue conference in Indonesia. Tissue World Jakarta will take place from 28-29 October at the Holiday Inn Jakarta Kemayoran. The future trends of this vibrant region are crucial for the global tissue industry: where next for a market that has experienced such rapid and aggressive growth? Participation details for the conference are in World News.

We'll see you there for business and some wonderful Indonesian hospitality.



Helen Morris

Editor,
Tissue World magazine

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Magnus Groth searching for 'win-win' across SCA's global performance

Tissue's global giant SCA has a new supremo. Magnus Groth talks to TWM about business strategy for China, Asia, Russia, The Americas, emerging markets, energy efficiency and the intriguing 'intelligent washroom solutions.'

TWM/1 What are the three main opportunities for SCA over the next five years?

Magnus Groth, SCA president and chief executive: "Vinda in China is very attractive for us. The company has a very strong position and a strong brand and it is a very attractive market to be in."

"SCA will also grow its AfH presence in emerging markets. While we have a 30% market share in AfH in Europe, and a 20% global market share, we are under-trading in emerging markets. We will also grow in hygiene markets and look to develop additional products such as soaps and intelligent washroom solutions."

"The third main opportunity is our incontinence brand Tena. Globally we have a 25% share of the incontinence market and we are growing that. The older generations want to live an active lifestyle and the world is ageing so this sector holds a lot of opportunities for us."

TWM/2 What are the three main challenges?

Groth: "Continuing with cost efficiencies are very important. Tissue is very asset intensive and we want to keep the current momentum we have in terms of developing efficiencies. This is also an opportunity with the scale that we have in achieving efficiencies."

"Increasing pulp prices in the short term is also a big challenge for us especially with the fluctuating exchange rate with the Euro and the American dollar."

"The third challenge is that there's some markets we want to grow in. In North America for example we're number three. Overall, we're number one in AfH and number two in consumer tissue. We have a strong position in consumer tissue in Europe at 30%, Russia we're 40%, Columbia and China we're very strong and looking to grow there also."

TWM/3 Are you looking to grow or acquire further in Europe? Does the industry need more consolidation?

Groth: "We have a 30% share in Europe so while there's not much opportunity



for us to consolidate further there, that share gives us a strong position. "In terms of further consolidation throughout Europe, it will happen."

TWM/4 Which tissue sectors are you prioritising in Europe?

Groth: "Private label is core to us. We want to be the best at private label and branded tissue."

"We have a very strong position with the retailers. Now it's about growing the category with adjacent products such as hand sanitisers, etc."

TWM/5 Where outside of Europe is a priority to grow and invest?

Groth: "North and South America. In North America, we're targeting AfH and in South America, they're still an emerging market so there's lots of potential there. We're number two in Mexico and leading in Columbia. The region is very important from a tissue perspective."

"Elsewhere, Russia is incredibly important and we are targeting the personal care category there."

TWM/6 Will SCA's presence grow further organically or through acquisition in Asia?

Groth: "Through Vinda we now have a presence in a huge and growing market. We are also looking to grow in the neighbouring Asian countries. "Depending on the opportunity, we are looking to acquire across Asia either through acquisition or through organic growth."

TWM/7 SCA reported record profits in January – what's your strategy to maintain this in the long term?

Groth: "To continue to grow in emerging markets. We also need to prioritise energy efficiencies and grow faster in the premium segments. It's about price mix, volume and cost."

TWM/8 How important is product innovation and environmental sustainability?

Groth: "Incredibly important. It's the only way to talk about price. If you have an important product that increases the attractiveness of the tissue category for retailers and, crucially, for the consumer, then it's a win-win situation. Innovation is key for increasing margins and growing the entire tissue category. It's our responsibility to make the tissue product attractive."



28 – 29 October 2015
(Conference)
Holiday Inn Jakarta Kemayoran
Jakarta, Indonesia

LAUNCH EVENT
Mark your diary!



Tissue World Jakarta, 28 - 29 October 2015, will feature a 2 days conference, 15 exhibiting sponsors and social functions.

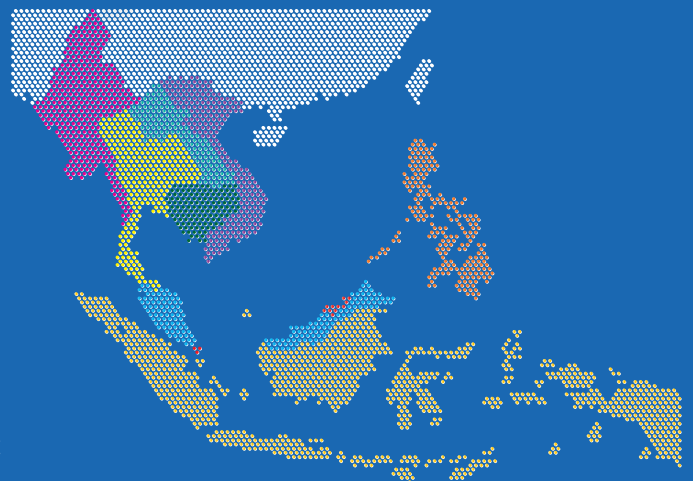
Why ASEAN, why Jakarta?

The future trends of this region are crucial for the global tissue industry: where next for a market that has experienced such rapid and aggressive growth?

Topics covered during the conference include:

- Realisation of the ASEAN economic community: how the pulp and paper industry should respond to this opportunity?
- Overcoming the challenge of depleting raw materials in the region
- Analysis of key supply-side and demand trends of tissue products in Indonesia in comparison to the rest of South East Asia
- The rise of the recycled tissue paper market – the link between perceived quality and consumers' willingness to pay for recycled hygiene products.

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TISSUE WORLD

São Paulo launch is a Tissue World winner with Brazilian flair. Here,



Tissue World's first venture into the vibrant South American tissue market attracted 1,119 influential participants from across the continent and beyond.

Feedback during and after the exhibition and conference set the seal on a successful, high level exchange of ideas and deal making.

The event was held from 20-22 May and welcomed key personnel to a hall where 63 companies were exhibiting.

Meanwhile, 27 speakers kept delegates up-to-date with the latest developments from across the industry.

They included the Bank of America Merrill Lynch's Thiago Lofiego, Klabin's Francisco Razzolini, CMPC Celulose Riograndense's Edvins Ratnieks, Huntsfield Brazil Consultancy's Geraldo Ferreira and Euromonitor's Leonardo Freitas.

Key talks were particularly relevant as Brazil, a BRIC nation, is an immense and unique country with a set of strict business rules and regulations that operators must abide by in order to

leverage its undisputed potential.

Highlighted trends included: global pulp market and supply/demand trends; Brazil's tissue market opportunities; engaging in the world production chain; key trends and opportunities in the expanding Brazilian tissue and hygiene market; and regional economic forecasts.

Tissue World São Paulo 2015 was launched with focus at the growing tissue industry in Brazil and South America, a fast growing market that has not previously had a dedicated tissue show to refer to.

Neighbouring countries also show great potential, in particular Columbia, Peru and Chile.

Tissue World São Paulo sponsors included Suzano, BTG and SKF.

TW will return to São Paulo from 7 – 9 June 2017 at the Transamerica Expo Centre (Hall E).

Read on over the next few pages for a summary of the key talks

D SÃO PAULO

TWM summarises some of the key talks from the three day conference.

GOING GLOBAL – towards sustainable tissue and pulp production to meet regional and international market demands

Overview of the South American economic climate and market opportunities

View on pulp production, consumption, and trade flows

Graham Toft, founder, Paper Technics, UK

The Big Picture: 2013 Production Values

Total pulp: 407 million tonnes
Recycled: 240 million tonnes
Chemical pulp: 150 million tonnes
Mechanical: 28 million tonnes
Bleached: 100 million tonnes

Market pulp is around 55mtpa (total of global exports)
BHKP is 33mtpa, BSKP is 22mtpa

Global Pulp Production By Region 2013

North America: 37%
Europe: 25%
Asia: 22%
Latin America: 13%
Oceania: 2%
Africa: 1%
Total global production: 179m tonnes (2012: 182 million tonnes)

Top 10 Producers: Pulp For Paper, Total, Production Weight (Tonnes)

United States: 26.9%, China: 11.3%, Canada: 9.7%, Brazil: 8.5%, Sweden: 6.3%, Finland: 5.6%, Japan: 4.8%, Russia, Indonesia and Chile: remaining
Global production = 179mmt in 2013

Top Four Pulp Producers Globally:

China: stable
Canada: decreasing quickly
US: stable, slow decrease
Brazil: rapid increase!

The Future Expectation From Latin America

Brazilian pulp production and exports in the first nine months of 2014 were 7.7% and 12.8% higher, respectively, on a year-over-year basis.

What does the export picture look like?

Top 10 exporting countries: Brazil, Canada, US, Chile, Indonesia, Sweden, Finland, Netherlands, Russia, Uruguay.

Top four pulp exporters: Brazil, US, Canada, Chile
Brazil and Chile have showed rapid expansion from early 2000s
Latin America expansion of market pulp capacity was 4.7% from 2009-2014
Latin America produces around 15 MTPA of market pulp currently (2015). Chile around 4.5 MTPA and Brazil around 9.5

Most of the exports from Latin America are BEK pulp (app 5 MTPA to CEPI in 2013 and 5 MTPA to Eastern countries).

Brazil's tissue market opportunity: Klabin's puma pulp mill project

Francisco Razzolini, project and industrial technology officer, Klabin, Brazil

In 116 years of history, Klabin grows supported by projects based on value creation

Largest Paper producer and exporter in Brazil
Market leader in all its businesses
Capacity of 2.0 MMtpy paper
Sack kraft: 210 Ktonnes
Coated boards: 750 Ktonnes Kraftliner: 800 Ktonnes
Recycled paper: 270 Ktonnes
Exports to 70 countries
Listed in BMF BOVESPA with a market capitalisation of US\$6bn

Puma Project: Located over an area of 830 hectares in Ortigueira, Parana state, the project's huge numbers will lead Klabin to double in size by 2016

Total investment: R\$5.8bn excluding forestry assets, infrastructure improvements and taxes

Production capacity: 1.5tpy: 1.1m tonnes of hardwood pulp, 400,000 tonnes of softwood pulp, with a portion converted into fluff

The fluff pulp - used primarily to make diapers and sanitary pads - will supply the domestic market, which currently imports this material

Some 1.1m tonnes of short fibre; 400,000 tonnes of long fibre

Due to the forest management model, Klabin was the first company in the pulp and paper industry in the southern hemisphere to receive FSC in 1998

High responsibility products for personal hygiene and health care

By the end of April, 58% of the project completed according to the budget.



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Global pulp market and supply / demand trends

Thiago Lofego, analyst – pulp and paper market, Bank of America Merrill Lynch, Brazil

Global Pulp Market

Pulp market well balanced; new supply well absorbed by demand growth

Prices to range-bound in the coming years

Hardwood prices up US\$50/t since recent lows; we see room for another US\$10-15/t in the short-term, as S/D remains balanced / tight

However, we do foresee pulp prices to soften during summer, on seasonally weaker demand and coupled with the start-up of Guaíba II (1.3 million tonnes)

Structurally, we believe hardwood prices should remain within the US\$700-800/t range in the coming years, sustained by:

- (1) Chinese paper production growth, with still low penetration per capita;
- (2) recovering developed market demand (US and EU);
- (3) further potential capacity shutdowns, given the high cost base of the industry.

Pulp Supply / Demand model

Demand growth is sustainable at 2-3% in the coming years or 1-1.5 million tonnes of additional demand

Key driver should be China, with demand expected to grow ~5% p.a. in the coming years: Imports are up 6% YTD in 2015, after a 7% increase in 2014

Hardwood shipments to China up 32% YTD

Closures / conversions can provide additional support, with 1.5 million tonnes already announced in 2015-16 and over 2 million tonnes closed in 2013-14

Pulp demand remains healthy

Chinese pulp imports up 6% YTD, after increasing 7% in 2014 (or +1.1 million tonnes)

Paper projects in China to add 1.5 million tonnes of demand in 2015-16

Expect global demand growth of 2-3% in the coming years (1-1.5 million tonnes)

China the key driver

A long cycle ahead, led by a shift to a domestic consumption driven economy

Chinese paper consumption/capita is still low at 70-80kg, versus ~200-300kg in developed economies fibre substitution will also play a role, as polluting domestic capacities are shutdown
Solid pulp demand growth expected in the coming years

Supply: one major project per year until 2017

One major hardwood project mandated until 2017-18,

Supply "Tsunami" never happened, prices bottomed at a healthy ~US\$725/t

Closures and conversions provide additional support

Closures removed 1.3 million tonnes in 2013 and another 0.7 million tonnes in 2014

Weaker EUR could mean less closures, but still expect them

to continue, focused in Northern Europe and North America. Conversions to other non-paper pulp grades also provide support, with 1-1.5 million tonnes already announced for 2015-16.

Inventories supportive for hardwood prices:

Hardwood inventories stand at 38 days, vs 39-day historical average
Softwood inventories stand at 33 days, vs 29-day historical average

Lean hardwood inventory levels should help support prices in the short term.

Pulp prices:

We expect hardwood pulp price at US\$735/t in 2015, US\$740/t in 2016 and US\$720/t in the LT
We expect softwood pulp price at US\$889/t in 2015, US\$880/t in 2016 and US\$850/t in the LT
We expect softwood / hardwood spread to stabilise at US\$130/t

Conclusions:

Pulp prices structurally supported, as supply additions are matched by demand growth

Pulp prices supported in the short term, but seasonal correction expected during summer months

Project pipeline in 2015-18 could raise concerns, but is absorbable by demand in our view

Demand growth is sustainable at 2-3% in coming years, or 1-1.5 million tonnes of additional demand (1 project)

Key driver should be China, with demand expected to grow ~5% p.a. in the coming years

Closures/conversions can provide additional support, with 1.5 million tonnes already announced in 2015-16.

Emerging acceptance of eucalyptus fibre – a tissue maker's perspective

Edvins Ratnieks, technology manager - woodpulp, CMPC Celulose Riograndense, Brazil

CMPC is a P&P company, established in 1920, that produces solid wood products, pulp, paper, packaging products and tissue in Latin America

CMPC's Figures: Sales: 4,831; EBITDA: 974; Net Debt: 3,494; Assets: 14,861

Market capitalisation of US\$7bn as of 30 April 2015

Operations in eight countries, selling to more than 45 countries

CMPC has expanded significantly through Latin America over the last two decades. 11x asset growth since 1990 (before CMPC's international expansion process)

Selected technical aspects of the eucalyptus fibre to set the ground for the tissue applications:

- Technological achievements that connect fibres and equipment to produce the papers with the desired quality and productivity
- Products' requisites around the world and the impact on the machinery
- The technological future for fibres and equipment.



Selected technical aspects of the eucalyptus fibre

The theoretical design of tissue paper softness is based on three main variables with a positive correlation among them:

1. Number of Fibres Per Gram (NFG) – numerous small fibres sticking out of the surface
2. Wet Web Flexibility (WWF) – adequate 3-D structure which produces the bulk softness and the pores for water absorption
3. Dry Bonding Strength (DBS) – efficient inter-fibre bonding to “freeze” the aforementioned features after paper drying

NOTE: The concept of paper strength is developed separately, in a dedicated layer with fully refined long or short fibres.

Selected technical aspects of the eucalyptus fibre

In this three-pronged design – NFG, WWF, DBS, the regular pulps in the market would fulfill the needs of a conventional tissue machine e.g. Crescent Former and its improvements:

- Concerning WWF and NFG :
- Eucalyptus wood density range is 450 - 550 kg/m³ with WWF=0,5-1,0
- NFG = 15 - 30 Million

Indonesian Acacia has WWF = 0,7 and NFG = 30 Million

- Concerning DBS:
- Unbeaten tensile strength should be enough for dry bonding
- Refined tensile strength preferably developed in a dedicated headbox
- refined pulp (BSKP - softwood or BEKP - eucalyptus)
- chemical/enzymatic treatments are valid treatments

The new technological achievements connect fibres and equipment

- Besides the micro-texture effect, in an advanced structured tissue papermachine, the wet pockets formation stresses and strains the tissue structure, release loose fibres out of the surface of the paper (again, the ubiquitous loose fibres!)

Technological achievements connect fibres and equipment

- TAD and Structured tissue variations produce a bulkier, more absorbent, and softer tissue product. A structured or molded pattern is created on special fabrics or belts and then maintained with subsequent hot air drying and pressing with significantly less nip loadings than conventional tissue machines.
- North American consumers purchase premium and ultra-premium tissue and towel products, and pay more for it.
- More energy efficient variations of the technology recently have been commercialised and are implemented mainly in North America.

Products requisites and the impact on the machinery have been driven by:

- Emergence of a small luxury sector in China could be serviced by the newer structured technologies.
- China and Latin America are set to grow. It opens up the opportunities for new generation machines to come on-stream and more quality segmentation to happen.
- Latin American market is largely conventional, no big opportunities for structured tissue. Small producers possibly could succeed. Swing machines can make a range of products. South America has the cheapest and abundant

eucalyptus pulp. It is producing the world's highest quality conventional tissue. Several mills are making Crescent Former quality bath tissue with 100% eucalyptus.

- Europe is basically frugal. It is hard to change the toilet tissue values of Europeans. No one sees the premium tissue really taking off there. Probably some structured tissue to make higher quality paper towels.

Niche markets have been explored around the world

- APP is re-launching its premium brand in Australia
- Premium parent-roll market is small, however it makes profits
- Structured towel quality is common in NA and Europe. Some Latin American countries already have such operations for local supply and exports
- Colombia and Mexico produce high quality bath tissue based on bulk softness both in conventional and structured/texturised machines
- South Korea and Taiwan push hard to differentiate products mainly based on surface smoothness in conventional layered machines

Products requisites and the impact on the machinery:

The conventional machines operating in Latin America with eucalyptus as the main fibre have in general one-layer headbox. To develop strength, the whole pulp is refined to some extent.

- Such tissue papers are of good quality. The “Scott handfeel” grade ranges from 80-85 points for those papers (100 represent the benchmark).
- The latest machines orders are energy-efficient, layered headboxes Crescent Former TMs, with gentle pressing, etc. They can arguably produce 100% eucalyptus separate layers for softness (un-refined) and for strength (fully refined).

The technological future for fibres and equipment:

- Bulk property measures include; compression, tensile stiffness, elongation, bending stiffness, and sonic modulus.
- Surface property measures include texture and friction.
- Instruments have been developed to make combined measurements simultaneously, like bending and friction.
- To date no single instrument or physical method used alone has been found to adequately classify a broad range of samples in the same fashion as the human hand and brain. The use of multiple measures and physical tests is required.
- Developmental trends in the field of remote sensing and surgery may lead to new insights and instrumentation that could eventually tell us how the human hand senses touch.

The technological future for fibres and equipment:

For the forerunners, it is the right time for a breakthrough. The model based on friction, stiffness and structure of a tissue is going to an end.

- Fibres selection, paper machine technologies and surface friction reducing chemicals have played important roles in the last 40-45 years.
- Several fibre suppliers have set their tree breeding programs to include the variables that play a role in tissue papermaking.
- The paper machines are evolving towards energy efficiency, productivity and quality.



- The chemistry, the belts and wires of the structured papers have been a good field for development.
- The accumulated knowledge is becoming common to several interested papermakers with affordable investments and production costs.
- The ultimate goal is to provide a tissue product that could be considered as good as a piece of the finest fabric.

Engaging in the world production chain

Geraldo Ferreira, Huntsfield Brasil Consultancy

There is a vicious circle between the Brazilian tissue industry, new capacities vs market absorption

Driving forces for future demand in South America:

Economic Growth - Constants up and downs, strong growth periods followed by financial difficulties.

Population Growth – Latin America continues to grow but at a lower rate, about 1% p.a.

Product penetration level - This will be the main demand driver, by increasing the number of users, and expanding the present users to consume a wider range of tissue products.

Development in tissue quality and product specification - main trend from single to double ply

Brazilian market extremely fragmented:

53% - 14 different mills, 14% - Santher, 13% - Mili, 10% - Kimberly-Clark, 10% - CMPC

Four national players dominate in China:

APP, Hengan, Vinda and C&S are top national players in China. APP and Hengan have capacity exceeding or close to one million tpa.

China market is less concentrated than developed regions

China shows lower concentration of tissue supply as top five players take up 44% of total capacity whereas the share in North America and Europe are up to 73% and 56%. Consolidation will take place in the future.

Chinese tissue industry

In 2013, the globe consumed 32m tonnes of household paper of which China accounted for 19%.

In 2008-2013, global consumption of household paper surged by 4.21m tonnes, of which contributed by China.

Creating market for high end tissue products

Head to the high end and added value product - Chicken x Egg factor

- Industry still production minded when they should be more commercial minded

Main assets of the Brazilian mills:

- Market Knowledge
- Distribution
- Brand
- Customer Knowledge
- Credit know how and knowledge.

Being part of the world production chain and work with your potential threats at its origin.

Importation of regular toilet tissue to create and open market for a new machine.

Imports to increase mix products adding high end added value products to your range.

Explore the good government relationship the Brazilian pulp and paper association has to implement a program of import duty free before a new machine is installed.

China will not invest on tissue production in Brazil. The focus is their local market.

The present and future overcapacity situation in China is crucial and will force players to export even more.

In the matured markets, like Japan, Europe, North America and Australasia, there is not much to grow. These markets will focus on the developing markets, especially South America lead by Brazil.

That is the importance of having the South American producers engaging themselves to the world production chain by exploring this oversupply in China to their benefit instead of waiting for them to come to their home market.

Key Trends and Opportunities in the Expanding Brazilian Tissue and Hygiene Market

Leonardo Freitas, research analyst, Euromonitor, Brazil

Latin American tissue and hygiene market

Brazil: the fourth biggest market in tissue and hygiene

Opportunities in fastest growing sectors

Investments in product sophistication

Key drivers behind the dynamic growth in the forecast period

25.47 billion - value in USD of Latin American (LATAM) retail tissue and hygiene market

30% - Brazil's market share

944m - Value sales in USD for Kitchen towels in LATAM

18.7% - Current growth for incontinence products in Brazil in 2014

2.6bn - Value in USD of the Brazilian toilet paper market

Points to take into consideration for LATAM

- Private label share is still at 3% in the region
- Currency issues are pushing the industry on a regional level, making imports less accessible
- Significant room left for further penetration of private label
- Class difference
- It is not possible to analyse the Latin American consumer as just one
- Marketing strategies to bring products to consumers and capture those looking for commodity product.

Brazil: The fourth Biggest In Tissue And Hygiene Worldwide

Brazil is the fourth biggest market, but the second one among the biggest in growth. Social changes have boosted sales for several product categories in Brazil.

Higher income = higher penetration rates.



So what to expect from the biggest categories in retail tissues in Brazil?

Toilet paper: +4.4% CAGR (2015-2019)

Kitchen towel: +3% CAGR (2015-2019)

As a future prospect: The elderly population is growing in Brazil.

A higher gender equality within the workforce may push sales for practical household products... Why?

Higher added value and raw material is being perceived by consumers.

Opportunities In Fastest Growing Sectors

A positive review period, but how's the consumer pocket nowadays?

So, what are the alternatives for the Brazilian consumer to continue buying quality products?

- Cash and Carry has an important role towards this behaviour
- Bulk shopping is one of the alternatives to balance cost-benefit for consumers

Does quality always means a well known brand in a price sensible market?

- As manufacturers are developing and improving their production, many lower cost products are also being enhanced in raw material quality.

Investments In Product Sophistication

More complete solutions and extra features are being offered
How to highlight the advantages of a high quality kitchen towel?
What do tissues have which towel doesn't?

Key Drivers Behind The Dynamic Growth In The Forecast Period

Key drivers: Product sophistication/ trade-up, value for money, higher investments in production capacity and new technologies, segmentation, higher average income over the past years

Neighbourhood stores: Improving the portfolio to gain space in the market

Fernanda Accorsi, trade marketing & retail specialist, founder FA Retail/cofounder NoFish, Spain

Improving the portfolio to gain space in the market

Why The Neighbourhood Stores?

They are 50 - 60% of the market for the two main categories: Toilet Paper and Kitchen Towel.

They are a good opportunity to increase: the market penetration (for categories that can still be developed); the offer/ demand for premium versions - add SKUs with higher value.

The new consumption patterns - what changed?

Location: 73% want to save time during the purchase: Fast, Simple, Enjoyable.

Convenience: It is not based on size anymore, but on the need. A neighbourhood store does not want just the little packings - they also want Toilet Paper with 16 rolls (not just the four rolls pack).

The BIG want to be small. The dispute for the neighbourhood (location and convenience) - Key accounts are investing on the small formats.

Technology: Many stores are already automated and also prepared with modern systems and softwares; Supply Chain, store management, shopper data.

Attention: 52% expect better service and complain for not receiving help from the staff.

REVIEWING THE PORTFOLIO: Let's think about how many active SKU's we have in our Portfolio.

Are we negotiating them on the right channels? If small stores want to offer the same SKUs as the big ones..

Reduce your mix, improve the shopping experience. Help the shopper to find what they are looking for.

Reduce the 'out of stock' of popular products. Don't wait for the client to reduce the range. Focus on the Core business.

Develop the market choosing more profitable SKUs. Develop the market choosing more sustainable options.

Advantage of small retail: Private labels are not present in all of them. Less can be better. Make your portfolio stronger.

Challenge: Stop wasting costs, time, efforts .. and paper!

Developing a maintenance strategy and implementation of CMMS

Robertas Krutikovas, general manager, Grigiškės, Lithuania

Grigiškės

Developing a Maintenance Strategy and implementation of CMMS

With rapid growth and business changes, production lines need to be reliable and maintenance cost has to be optimised.

Grigiškės had big reliability problems with equipment. There was no frequent predictive maintenance activity and maintenance was mostly firefighting and sometimes preventive maintenance was done. Grigiškės needed to change the maintenance strategy. The changes were made and they give good results.

Innovative and growing

Group: established in 1923: "Grigiškės", "Baltwood", "Klaipėdos kartonas", "Mena Pak", "Klaipėda Recycling"
814 staff
Geography - Lithuania, Ukraine
Sales - €99,6m in 2014
Investments - €20,4m in 2014

Identifications for improvement

GRIGIŠKĖS had big reliability issues related with equipment, because there was:

- No frequent Predictive Maintenance (PdM) activity
- No Preventative maintenance, mostly firefighting
- No Computerized Maintenance Management System (CMMS)
- No Asset register, no hierarchy
- No daily Planning and Scheduling
- No Work orders
- No systematic Lubrication management
- No clear Spare parts management
- No documented Root Cause Failure Analysis (RCFA)
- No Proactive management for continuous improvement
- No Work history: Meantime Between Failure (MTBF), Failure modes, actual information
- No maintenance culture

GRIGIŠKĖS was looking for solution how to:

- Increase OEE (overall equipment effectiveness)
- Minimise unplanned downtime on production lines
- Reduce total maintenance cost per product ton
- Manage spare parts stock level
- Ensure human resource efficiency
- Achieve improvement in reliability and efficiency of production
- Develop a maintenance strategy

Company objectives: Why did GRIGIŠKĖS choose development with qualified consultants ?

- Knowledge and data stays inside company
- Possibility to apply "best practice"
- Time saving with strategy implementation
- Optimal investment compared to full outsourced maintenance
- Lower risk compared to own staff strategy development

Implementing the new strategy into a Computerized Maintenance Management System

Project scope:

Start of the project" February 2011

Duration: 12 months

Scope: 3000 assets, six Business units (departments), MSR+CMMS+PRM

CMMS: IBM Maximo 7.5

MSR: AMST 7.0

Scope of the project

CMMS (computerized maintenance management system) implementation

Maintenance strategy review (SRCM)

PdM program with continuous improvement and RCA

Lubrication optimisation and management



Spare part and lubricant stores assessments

Training

Proactive management for continuous improvement

Benefits from complex implementation of CMMS, MSR and Proactive Reliability Maintenance (PRM)

Maintenance strategy review

This method creates the documented basis for the maintenance program. The results are: time-based tasks, predictive and condition-based tasks, operator tasks and run-to-failure (RTF) identified

Changing the company culture to accept the new maintenance strategy and systems

Work culture

1. Culture change

It is important to understand what is happening and what benefit the changes will bring. The mentality could be changed using good practice examples.

2. New way of work

The understanding that the way people worked before is not the only best way - is not cheap, quick and easy. New inspection and maintenance technologies.

What does keeping tolerances mean? What is the influence of lubrication and axial alignment?

Working conditions, effecting work quality – maintenance is the "cleanest work".

Failure cause identification and management Hummer is not the main and best tool.

3. Resources, Roles and Responsibilities

Everything must be known: What? Why? How? Who? When?

4. Production apart Maintenance, Electrician apart Mechanics

Better collaboration between operators, mechanics and electricians.

5. This is not a short-term project

Company benefits: Available data and KPI to analyse, BOM (bill of material), Clear Downtime registration, Maintenance cost, HR efficiency, Maintenance strategy, Asset/Work priorities, Preventive Maintenance (PM) tasks, Clear and documented business processes, Planning and Scheduling, Proactive maintenance, PDM implemented, RCFA in place, New organisation structure, Culture change, Training more than 1,000h, No more "good enough", competence growth.



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COLUMBIA

SCA says Colombian anti-trust inquiries "will not have a material financial impact"

SCA has said its joint venture Productos Familia S.A. is under investigation by Colombian authorities over anti-trust issues. The company owns 50% of Productos Familia and it also said that in addition to reviewing the joint venture's operations in Colombia, competition authorities were also reviewing its operations in Ecuador and Peru, as well as its wholly owned businesses in Chile, Spain, Poland and Hungary. SCA and/or joint ventures are cooperating with the authorities and providing the requested information.

Kersti Strandqvist, senior vice president, corporate sustainability, SCA, said: "Free and undistorted competition is an important cornerstone in every society and for every business operation. "We take a very serious view of all cases in which our business is called into question. "In this particular area, SCA has a comprehensive, ongoing programme for training employees and ensuring adherence to competition rules." The company added: "SCA conducts

operations in more than 100 countries and, in many cases, holds leading market positions.

"It is natural that SCA, similar to other major international companies, is the subject of investigations by such institutions as competition authorities in various contexts and for various reasons." SCA said it has assessed that the ongoing inquiries will not have a material financial impact.

INDONESIA

PT Suparma Tbk boosts capacity

PT Suparma Tbk has started up a new tissue line at its site in Surabaya. The Valmet-supplied Advantage DCT 100 TM increases the company's production of bathroom tissue, towel and diaper tissue for the Indonesian market by 25,000 tonnes per year. It fulfils the company's ambition to produce sustainable products of high quality in a cost-efficient way. Edward Sopanan, PT Suparma Tbk director, said during the initial run the company managed to produce commercial grade tissue on the second day. Valmet's delivery included a complete

high-speed tissue production line featuring an Advantage DCT 100 tissue machine equipped with an OptiFlo headbox, a cast iron Yankee cylinder and an Advantage AirCap Yankee hood. It also supplied part of the stock preparation equipment as well as basic engineering, installation services and start-up of the machine.

The new line has a width of 2.75m and an operating speed of 1,600m/min.

Raw material for the new production line is virgin fibre and recycled fibre.

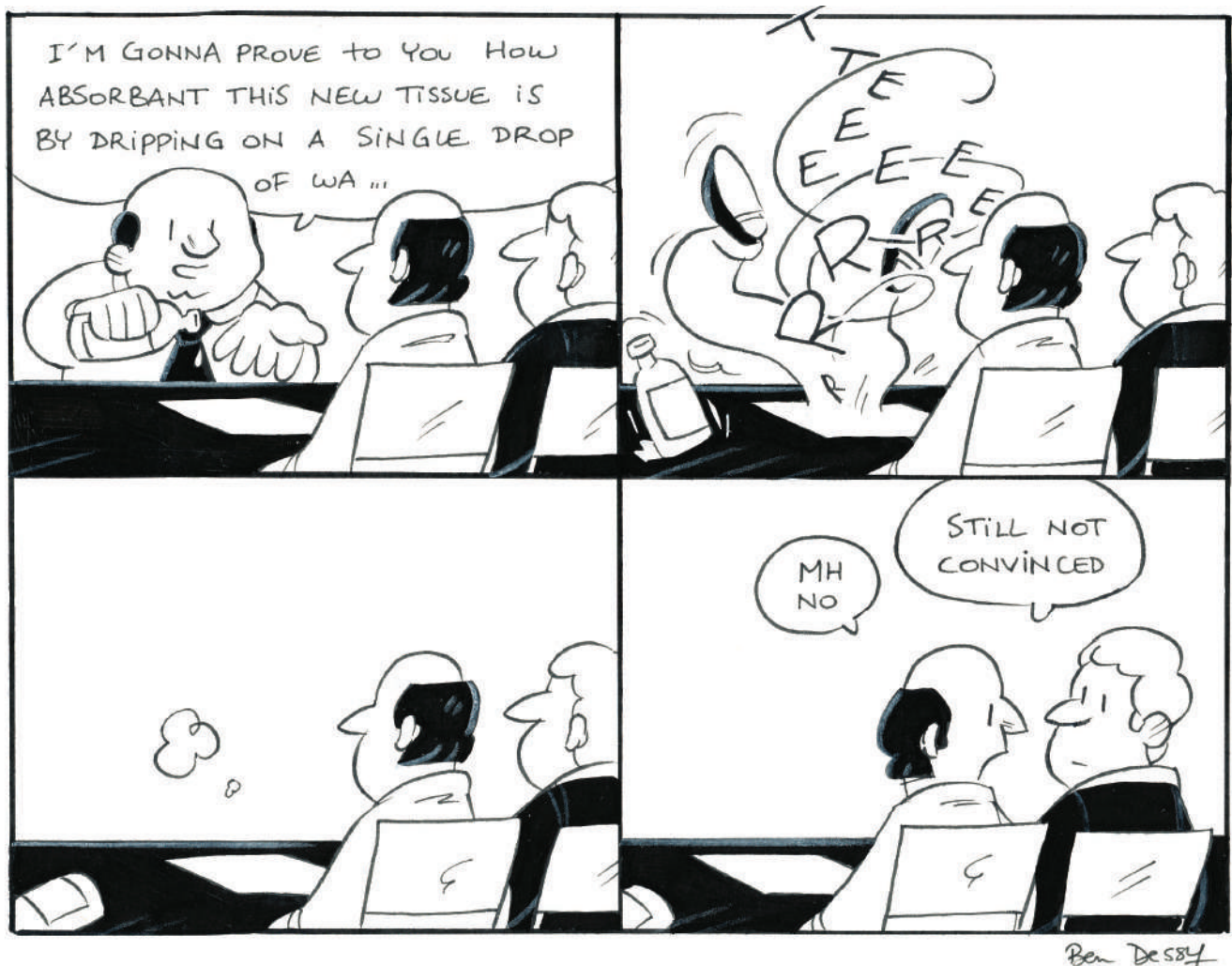
PT Suparma Tbk was founded as a paper and board producer in 1976.

It established its first tissue machine in 2007 and now supplies high-quality board, laminated wrapping kraft and tissue paper for the Indonesian market as well as the Asian, Australian and African markets. The company employs 1,800 people and produces over 200,000 tonnes of paper per year.

'PT Suparma said its new TM fulfils its ambition to produce sustainable products of high quality in a cost-efficient way.'



25,000tpy capacity increase for the Indonesian, Asian, Australian and African markets



Ben DeSoy

TWM cartoon | July/August 2015

MIDDLE EAST

Private equity consortium takes minority stake in Nuqul's FINE Hygienic Holding

A consortium led by Standard Chartered Private Equity (SCPE), the private equity arm of Standard Chartered Bank, has invested \$175m to acquire a "significant minority stake" in FINE Hygienic Holding, a subsidiary of Jordan's Nuqul Group, according to a statement from Standard Chartered.

A majority of the investment will be used to fund the expansion of FINE's production capacity, SCPE said.

According to a spokesperson from Standard Chartered, who declined to disclose the size of the stake, the other consortium partners are "selected Asian sovereign wealth funds and prominent Gulf Cooperation Council (GCC) families." SCPE will be granted two seats on FINE's

board and will contribute to the firm's growth strategy and an eventual IPO, according to the company.

"This is SCPE's sixth investment in the Middle East and North Africa (MENA) [region], and its second investment in a Jordanian-headquartered company, [taking its] overall MENA direct investments to \$560 million," the spokesperson said. The Nuqul Group declined to comment on the matter.

The Nuqul Group operates four tissue paper plants in Jordan and Egypt: the Al Keena and Al Snobar mills in Jordan have an annual capacity of 30,000 tonnes and 54,000 tonnes, respectively.

In Egypt, the company manufactures 20,000tpy and 54,000tpy of tissue paper at its Al Sindian mills. In addition, Nuqul Group has converting sites in Jordan, Saudi, UAE, Egypt and Morocco, with a total capacity of approximately 150,000tpy of tissue products.

News from RISI (www.risiinfo.com)

GERMANY

Man killed in accident at Metsä Tissue's Stotzheim facility in Germany

A 41-year-old truck driver was killed in an accident at Metsä Tissue's Stotzheim facility in Euskirchen in Germany on 29 April.

According to the local police department, the accident occurred around 10am, when paper rolls were being unloaded from a truck with a forklift.

A 1.2 tonne paper roll fell from the forklift onto the truck driver.

Metsä Tissue declined to comment on the matter as the police investigation is still ongoing.

News from RISI (www.risiinfo.com)

Tissue World Jakarta: TW first in a vital and dynamic region

The newly launched Tissue World Jakarta Conference 2015 will bring together crucial conference topics that forecast how this vastly important and dynamic region will continue to impact the world's tissue industry. Taking place at the Holiday Inn Jakarta Kemayoran from 28 – 29 October 2015, it is the latest territorial advance in TW's map and will feature a two day conference, 15 exhibiting-sponsors and social functions.

It will draw in the ASEAN and Asia Far East region's tissue markets – a large portion of the world's most competitive, influential and growth-hungry companies.

The future trends of this region are crucial for the global tissue industry: where next for a market that has experienced such rapid and aggressive growth?

How will the expansion speed of Asian tissue mills – including the rapid trend of companies not previously in tissue moving into it – continue to have crucial implications for the rest of the world's market?

Can major changes, mergers and acquisitions still be expected, and will the market see restructuring needs met and ambitious expansion plans kept?

The conference will address these issues and many more.

A draft programme of the event – as TWM went to print on 21 June 2015 – included the following:

- Realisation of the ASEAN economic community: how the pulp and paper industry should respond to this opportunity?
- WWF Indonesia: Setting a new standard to contribute positively towards forest conservation, emission reduction and people
- What's next for the pulp and paper industry in Indonesia with the environmental issues it faces?
- Overcoming the challenge of depleting raw materials in the region

- Panel discussion: Turning over a new leaf in sustainability – leaders and their commitment to forest conservation
- Analysis of key supply-side and demand trends of tissue products in Indonesia in comparison to the rest of South East Asia
- The rise of the recycled tissue paper market – the link between perceived quality and consumers' willingness to pay for recycled hygiene products.

Within its 10 countries, ASEAN is home to nearly 10% of the world's population, and ranks as the seventh largest economy; by 2018, it will be the world's fifth biggest.

Taken as a whole, ASEAN is expected to grow by an annual average of 5.6% for the next five years.

The launch for Tissue World is based on industry feedback with the aim of tapping into all key strategic tissue markets worldwide.

Why Indonesia?

- Indonesia is the pivotal country in ASEAN and its most populous (250m people)
- Indonesia is by far the largest exporter of tissue paper in the Asia Far East region
- Indonesia is the second biggest world's exporter of parent rolls (after Italy)
- It tops the expected volume growth forecasts in the region for the next ten years
- Tissue paper in the country is predicted to maintain double digit growth over the coming five years
- It is one of the key pulp producers in the world
- Nearly 100% of paper machinery and parts in paper.

For more details, go to:

www.tissueworld.com/Jakarta



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CHILE

CMPC posts sales of \$1.16bn in 1Q 2015; aims to start commercial operations for new BEK line in 2Q 2015

Chilean group CMPC has registered consolidated sales of \$1.16bn in the first quarter of 2015, down 3% compared to the previous quarter and down 1% year-on-year.

EBITDA hit \$239m, 4% lower than a year ago, with a 21% margin.

The company also posted a net loss of \$77m in the first three months of the year, compared to a net income of \$38m in 4Q14 and a net income of \$46m over a year ago.

CMPC commented that excluding the impact of currency movement on deferred taxes it would have posted a net income of \$79m.

CMPC's market pulp volumes in the quarter were 508,000 tonnes, 6% lower than a year ago, reflecting the preparation for the start-up of Guaíba II, as well as specifically inventory normalisation and maintenance downtime during the quarter at Guaíba I and Pacífico and Santa Fe II in 2Q15.

Tissue sales volumes were also 3% down, at 146,000.

The company stated that the Guaíba II project is currently in the process of final adjustments and start up sequence, in line with its original schedule and budget. The venture conveys a 1.3 million tpy bleached eucalyptus kraft (BEK) pulp line in Brazil, beside an existing 450,000tpy mill. CMPC aims to start commercial operations for the new line in 2Q15.

News from RISI (www.risiinfo.com)

FPC starts up NTT line

Producer Forestal y Papelera Concepción (FPC) has started up its new 60,000tpy virgin fibre-based tissue paper machine (PM).

The equipment was supplied by Metso and is being installed at FPC's Coronel mill, in Concepción province, Bío Bío region.

FPC has invested \$150m in the project, including a 15,000tpy Futura converting line which began operating in November 2014.

According to the company, around 50,000 tonnes of the new PM's tissue production will be exported to the USA and Asia, and the remaining volume will be sold in Chile.

AMERICA

Doubletree Paper Mills boosts capacity

Doubletree Paper Mills has started up a PrimeLineCOMPACT tissue machine with Steel Yankee at it Arizona mill.

Supplied by Andritz, the machine has a design speed of 2,100m/min and a width of 2.6m.

The Yankee is manufactured entirely of steel and has a diameter of 4.8m.

Andritz supplied the tissue machine on an EPC basis, including the crescent former, the complete stock preparation plant, and automation systems.

ARGENTINA

Papelera San Andrés de Giles starts up new tissue converting line

Tissue producer Papelera San Andrés de Giles has started up a new converting line.

Commercial director Andrés Gagliardi said: "We have completed the start-up of the Tango II converting line installation, which started up on 18 May with a capacity of 1,000 tonnes per month depending on the product converted."

The company invested €3 million in the Tango II project.

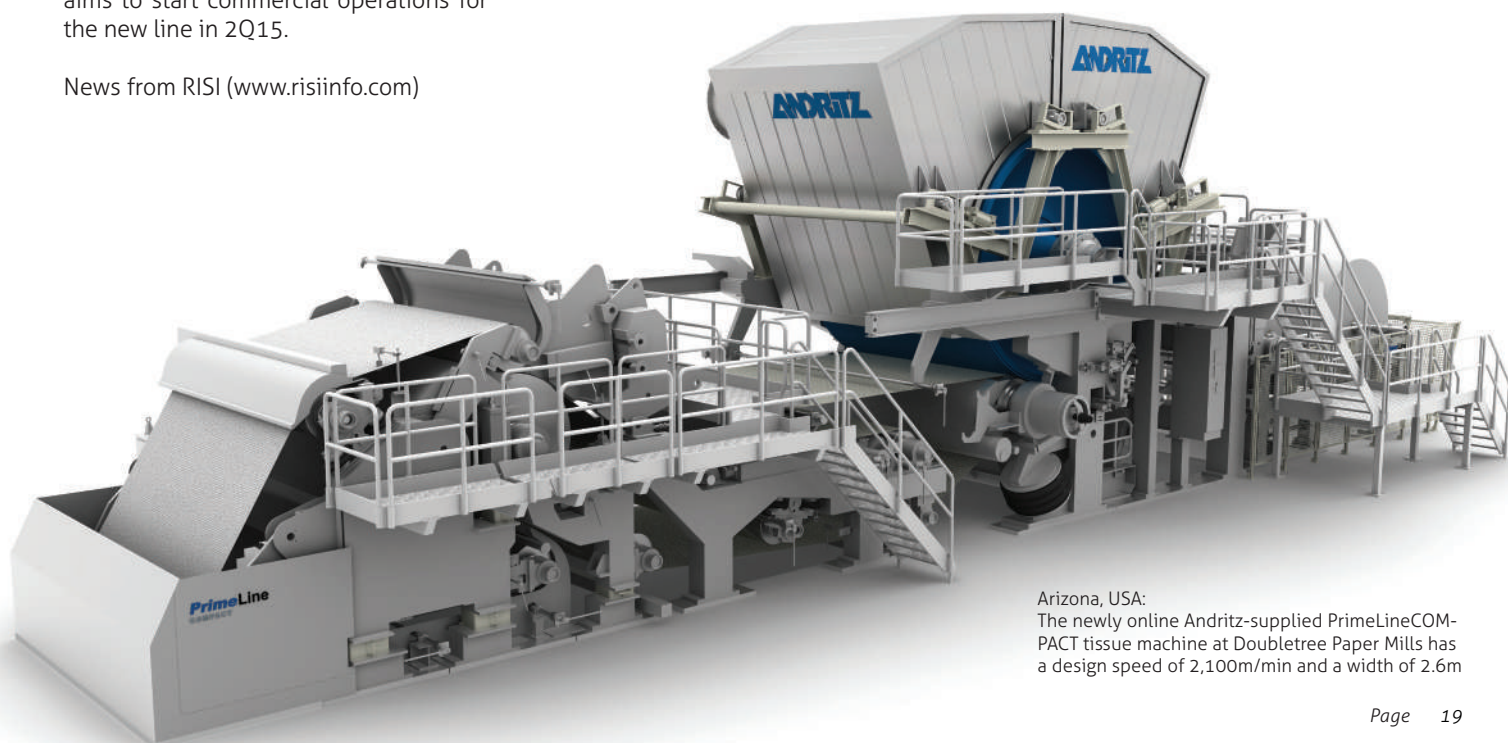
Gagliardi added that Papelera San Andrés de Giles has also recently invested \$900,000 in a new napkin folding machine supplied by Omet which produces 50,000 napkin packages per month.

It has another napkin folding machine at the San Andrés de Giles plant.

Last year, the company produced 15,000 tonnes of tissue paper on the sole paper machine at its mill located in the city of San Andrés de Giles, Buenos Aires province.

"2014 was a very good year for our company. We increased our sales and sold all volume we produced. This year has started at a very good pace as well and we have very good perspective for sales with new clients," Gagliardi said.

Papelera San Andrés de Giles also closed an agreement with Celulosa Argentina to buy 1,500 tonnes/month of tissue paper from its new paper machine installed at the company's Capitán Bermúdez mill.



Arizona, USA:

The newly online Andritz-supplied PrimeLineCOMPACT tissue machine at Doubletree Paper Mills has a design speed of 2,100m/min and a width of 2.6m

According to Gagliardi, Papelera San Andrés de Giles' tissue prices increased by an average of 20% in 2014 over 2013, following the guidance of Argentina's Interior Commerce Secretary.

News from RISI (www.risiinfo.com)

Celulosa Argentina starts production on 30,000tpy TM

Pulp and paper producer Celulosa Argentina started up its new 30,000tpy tissue paper machine (PM) on 25 April at its Capitán Bermúdez mill, located in Santa Fe province.

The Voith-supplied tissue line has a wire width of 2,760mm and runs at 1,800m/min, producing 15-21g/m² basis weight toilet tissue and kitchen roll from virgin fibre.

The estimated Euro 18 million (\$25 million) investment will allow the company to diversify its current portfolio of papers.

News from RISI (www.risiinfo.com)

SWEDEN

SCA audit finds representatives acted in compliance with Swedish law

SCA has said an independent audit investigating claims its staff were involved in extravagant corporate perks found its representatives "acted in compliance with Swedish law and company policies". The company had been in the spotlight during 2014-15 over media allegations about its senior executives' use of business aviation and hunting for hospitality purposes.

SCA said it appointed two independent audits: accounting firm PwC and Forsberg, authorised public accountant, Deloitte, and Johan Munck, former Justice of the Supreme Court.

In a statement SCA said: "The investigators have determined that the company and its representatives have acted in compliance with Swedish law and the company's policies.

"The company's auditors have also submitted an unmodified auditor's report for 2014.

"Furthermore, the investigators concluded that there are no grounds for SCA to make financial claims against individuals and

that the board of directors and the former president should be discharged from liability."

It added that PwC's investigation focused on the use of business aviation, while the second audit also included aspects such as the hunts arranged for business hospitality purposes.

The statement said the investigations criticised SCA's invoicing procedures and the high cost of business aviation, which was due to a number of reasons.

"The investigations' findings that confirmed that all of the journeys taken by the former president and chief executive in the business aircraft were designated as business trips, that the journeys taken by the chairman of the board and the other board members complied with the company's policy for business aviation and that all issues investigated were determined to be in compliance with Swedish law."

In December 2014, SCA revised its policy on the use of business aviation, entailing that the family of employees and other external individuals are not permitted to travel on the business aircraft and that it may not be used in conjunction with business hospitality.

In February, it was announced that Jan Johansson was to step down as president and chief executive.

The company had been in the spotlight over media allegations that include extravagant corporate perks including the use of private jets.

At the time the on-going audits were understood to have cost the jobs of three of its senior executives.

SCA reported record profits in January 2015, with the group delivering its highest pre-tax profit ever, up 17% to SEK 10,888m year on year. Net sales rose 12% to SEK 104,054m.

"The investigators have determined that the company and its representatives have acted in compliance with Swedish law and the company's policies." SCA

GLOBAL

SCA reports 15% net sales increase

SCA has reported an increase in net sales in its Q1 interim report, up 15% to SEK 27,958m.

Between 1 January and 31 March 2015 compared with a year ago operating profit also increased 9% to SEK 2,872m while pre-tax profit increased 11% to SEK 2,602m.

CEO and president Magnus Groth said: "We delivered good organic sales growth and a higher operating profit in all business areas during the first quarter of 2015 compared with the same period a year ago.

"Emerging markets have continued to show high growth and sales in Europe also developed well."

The global hygiene products market "was affected by greater competition, low growth in mature markets and continued favourable growth in emerging markets". The company said the European and North American markets for incontinence products showed low growth in the institutions and home care sectors, and continued good growth in the retail market. Emerging markets showed favourable growth in demand for incontinence products.

Tissue showed an operating profit increase of 12% to SEK 1,556m because of a better price/mix, higher volumes and cost savings.

Net sales for tissue increased 18% to SEK 15,435m.

For consumer tissue, organic sales growth was 7% and for emerging markets, particularly China, there was a high growth in sales.

For AfH tissue, organic sales growth was 2%. The increase was mainly related to North America.

Groth added the company had invested and will continue to invest in emerging markets, where net sales grew 11%.

In March, SCA inaugurated its first manufacturing facility for personal care and tissue products in India.

Suzano announces entry into hardwood fluff pulp segment

Suzano Pulp and Paper has introduced its new EucaFluff product at Tissue World São Paulo, marking the company's move into the hardwood fluff pulp segment.

The Brazilian market for fluff pulp – used

primarily by the disposable sanitary napkin and diaper segment – is estimated at 400,000tpy.

Suzano said previously this demand has only been met by imports of traditional softwood pulp.

Its objective is to develop new applications for eucalyptus pulp, and to position itself as Brazil's first fluff pulp supplier and the world's first manufacturer of fluff pulp made from eucalyptus.

Following a R\$30m investment, the company will start producing EucaFluff in December and aims to produce 100,000tpy and meet 25% of Brazil's demand. Production on an industrial scale will require the adaptation of a printing and writing paper machine at a mill located in the interior region of the state of São Paulo.

According to Pöyry, annual global demand for fluff pulp should reach 6.2m tonnes per year by 2025.

Fabio Figliolino, executive manager of innovation, said the new raw material developed by the company, which will be delivered to clients in reels, maintains the high absorption capacity of softwood fluff pulp.

"It's possible to partially substitute softwood pulp depending on the type of product and its composition.

"In the case of sanitary napkins for women, for instance, it's possible to substitute 70% of the raw material with eucalyptus pulp. In the case of diapers, at least 30% of the material can be substituted," he said.

Performance tests with EucaFluff involved a large client of Suzano's in the sanitary napkin and diaper segment.

Suzano Pulp and Paper is a subsidiary of Suzano Holding and part of the Suzano Group, one of the largest vertically integrated eucalyptus forestry, pulp and paper producers in Latin America.

It operates six industrial units: Suzano, Rio Verde, Limeira and Embu in the state of São Paulo, Mucuri in the state of Bahia, and Imperatriz in the state of Maranhão.

GP files case against discounter, Soundview, Solaris in federal court

Georgia-Pacific (GP) is understood to have filed a federal lawsuit against discount grocery chain Aldi along with Soundview Paper and Solaris Paper for allegedly "passing off its bath tissue as that" of GP's top-selling Angel Soft, the Atlanta Journal-Constitution reported.

The report alleges that GP said that Aldi's private label Willow SoftTouch packaging carries the words "Now with 15% more sheets than Angel Soft" and "Compare to Angel Soft Bath Tissue."

GP said the packaging imitates GP's packaging in the colour of the label, images of clouds, a picture of a baby, and the use of the word "soft."

GP filed the lawsuit on 16 April in US District Court in Atlanta.

Aldi, Soundview, and Solaris, which is supplied by Asia Pulp & Paper, are accused of unfair competition, federal trademark infringement, state trademark dilution, and unfair and deceptive trade practices.

GP seeks damages, and wants a federal judge to order the destruction of "all bath tissue, bags, boxes, labels, tags, signs, packages," and other Soft Touch brand product.

Aldi operates 1,400 stores from Kansas to the US East Coast.

Since 2010, GP, North America's largest tissue paper producer by capacity, generated \$7 billion in Angel Soft toilet tissue revenue, and spent \$175 million on advertising for Angel Soft.

Mike Motherwell, VP of marketing and communication for Solaris Paper in the United States told TWM: "The matter currently resides within the legal system and it would be inappropriate to comment on any specifics during this time."

PMP Group launch targets tissue sector

PMP Group has launched PMPower, a new facility that will be responsible for energy solutions for tissue and paper mills.

The supplier said that widening its product portfolio based on Intelli-Tissue® and Intelli-Technology® platforms is a natural progression.

It will mean more options are available for technological development and optimisation.

Located in Lucca, Italy, the basic business concept is to design the equipment in Italy and produce it in PMP Group's facilities in Poland (PMPoland and PMPKonmet) and alternatively in China – PMP IB.

PMP Group can now offer air hood drying and steam and condensate systems for tissue machines, closed hoods and steam and condensate systems for PMs, sheet stabilising units and pocket ventilation for PMs, energy recovery systems, mist removal systems, wet dust removal systems and building ventilation systems.

The group will also consult on services in the field of energy saving solutions, including new project ideas and advisory services connected to existing lines.

INDIA

Krishna Tissue to boost capacity

Krishna Tissue is to boost its capacity after it signed for a state-of-the-art winder supplied by A.Celli Paper.

The model AC842 paper rewinder is the main element of a new project that will produce 80-320gsm testliner products.

It will be installed at the company's Kolkata site and will have an operating speed of 2,000m/min and a 5.6m format. The supplier added it is the first paper rewinder in India bought from a European supplier and is scheduled to be delivered by the summer 2015.

FRANCE

SCA to permanently suspend operations at French tissue mill by October

SCA plans to stop all operations at its Saint-Cyr-en-Val facility in France by October this year, affecting 119 workers.

According to a spokesperson from the company, a combination of factors has led the firm to take this decision.

"First, the mill is producing high quality tissue using through TAD technology for private labels," he said, adding that this mature, stagnant and competitive market has to compete with brand owners.

"Second, the mill's production unit does not fit with the European industrial production standards."

He added: "The mill's PM has a width of 3.48m compared to a European standard width of 2.65 – 2.70m, creating 30% waste and additional production and transport costs."

Statutory negotiations took place with employee representatives. On 8 April, workers observed a 24h-hour strike at the plant to protest against the closure.

The Orléans mill used to produce 35,000tpy of tissue for toilet paper and kitchen rolls.

According to the spokesperson, the



EL SALVADOR

A.Celli Paper starts up TM

A.Celli Paper has started up a tissue machine in El Salvador. The rebuild project for a confidential industrial group began in September 2014. The machine has a width of 2,800mm, a working speed of 1,500m/min and a production capacity of 65 tpd.

facility does not produce tissue for toilet paper anymore.

Production on the mill's PM was stopped three weeks per month, while the firm's converting activities are suspended 10 days per month.

The mill's production activities should be transferred to the firm's Gien mill while the converting operations should be transferred to the Theil facility.

News from RISI (www.risiinfo.com)

RUSSIA

Arkhum Tissue Group progresses with 70,000tpy tissue PM

Russia's Arkhum Tissue Group, managed by Arkhangelsk pulp and paper mill (APPM), is forging ahead with its plans to install a new tissue mill in Vorsino, in the Kaluga region, some 90 km southwest of Moscow. The firm has finalised the suppliers of all equipment and machinery for the plant. Arkhum has signed up Andritz to deliver

the 200tpd tissue machine, which will use 100% virgin pulp, as well as cogeneration equipment.

Arkhum intends to start construction work at the end of July 2015. In Q1 2017, it plans to start-up the 2.8 m wide tissue machine as well as several converting lines for the production of toilet paper, kitchen towels, tissues and napkins. The cost of this project is Euro 110m (\$118m).

In 2019-2021, Arkhum intends to further increase the plant's converting capacity by installing additional lines.

The equipment will make tissue products for the consumer as well as the hotel and foodservice (horeca) market segments.

The firm also said that it had cancelled its initial plan to build a 100tpd tissue machine which was due to come online in 2015. APPM told RISI that this decision was taken amid the rising cost of bank loans and high competition on the Russian tissue market.

Arkhangelsk PPM is part of Austria's Pulp Mill Holding (PMH). PMH also operates the Kiev paper and cardboard mill in Ukraine, which produces tissue, cartonboard and containerboard.

News from RISI (www.risiinfo.com)

ITALY

Italy's Roto-cart shelves plan to build tissue converting facility in Austria

St. Veit an der Glan in Carinthia, southern Austria, will not be the home of a new tissue converting facility. Italy's Roto-cart, which was planning to spend up to Euro 70 million (\$79.7 million) on the project, cancelled its plan, due to, amongst other reasons, the "tight financial situation of the state of Carinthia."

Roto-cart announced one and a half years ago that it was planning to build a tissue converting facility in the St. Veit industrial area. The project provided for the creation of around 120 jobs.

However, now Roto-cart said that the Hypo crisis - Carinthia faces probable bankruptcy after Austria's central government refused to vouch for debts left by the Hypo Alpe Adria scandal - had dampened the spirits of the banks that were to finance the project. Moreover, the Italian company cited changes in the allocation of EU subsidies and difficulties in the time management of the project's financing as reasons for its decision to cancel its investment plans.

Roto-cart, based in Treviso, northern Italy, employs more than 100 people at two converting sites in Italy.

News from RISI (www.risiinfo.com)

PORTUGAL

Fortissue starts up new tissue machine in Viana do Castelo

Production is up and running on a new tissue machine in Portugal.

Fortissue Produção de Papel, which is part of the Suavecel group, started production at its mill in Viana do Castelo in late March. The new machine can produce 120tpd of tissue for household and sanitary use. Its startup created 35 jobs.

Fortissue brought the new machine online later than originally planned due to energy supply issues.

The firm confirmed articles in the local press according to which the high-voltage line that was to supply the mill was not installed on time.

"The startup needed to be postponed by two months compared to the initial program because of the delay in the supply of energy. We had to interrupt the installation

process," mill director André Silva was quoted in the local press as saying. Fortissue's Euro 30m investment project originally provided for the installation of two paper machines and the creation of 180 jobs.

However, the realisation of the second phase reportedly depends on market conditions and the economic development.

News from RISI (www.risiinfo.com)

EUROPE

Södra hikes up softwood prices

Södra has increased the price of its softwood pulp in Europe to USD 870 per tonne.

The pulp producer said the move was "due to low global softwood pulp stocks and solid demand".

It made the increase for the market price of NBSK in Europe from 1 June 2015.

The company also reported an operating profit for the first four months of 2015 of SEK 941m.

Sales increased 7% to SEK 6,243m and the operating margin improved to 15%.

Chief executive Lars Idermark said: "The year started well for Södra, with healthy sales and strong results.

"The market has been stable, prices relatively good and the currency situation favourable.

"Production has also been efficient and we are seeing the results of continued rationalisation."

Demand for pulp remained stable, but the company said the currency trend with a strengthened USD against the EUR led to a slightly lower world market price for NBSK.

Södra added that earnings improvement for the first four-month period is the result of "healthy demand for Södra's products and services and a favourable currency situation".

CHINA

China's tissue market under oversupply pressure

China's tissue capacity may rise to around 10.44m tpy by the end of this year, up by 10.6% from 9.44m tpy in 2014, according to the latest statistics from the China National Household Paper Industry Association (CNHPIA).

However, overall operation rates will dip to around 76%, down from 78% in 2014, because of oversupply, CNHPIA Vice Secretary General Zhang Yulan said at the China International Disposable Paper Expo. The association stressed the Chinese market can only handle some 500,000tpy of net new capacity each year.

However, annual increases in the past several years have surpassed that, resulting in the current overcapacity issue. And more machines are still coming online.

The CNHPIA's statistics indicated that the new PMs scheduled to start up this year and in 2016 will have a combined capacity of 3.25m tpy.

But Zhang mentioned that there will be more startup delays in the near future because of the present level of supply.

The association anticipates that the Chinese market will keep growing in the long run, as the country's tissue consumption is only 4.7kg per capita, which is only around the world's average.

Mills down: The tissue sector, which used to have very high profit margins, has drawn in a lot of investment and new players.

But the current market difficulties have forced some mills out of action.

Xiamen Xinyang Paper, a new entry into the sector, started up a 60,000tpy tissue PM in 2012 at a greenfield mill in Xiamen city, Fujian province. But the mill has been idle since the end of 2014. In Guangxi autonomous region, two regional tissue producers also shut down early this year.

Nanning Phoenix Pulp & Paper has a tissue capacity of around 75,000tpy and a bleached kraft pulp capacity of 150,000tpy at its mill in Nanning city.

Production at the mill was suspended around February. Almost at the same time, Guangxi Huamei Paper Group, which has several tissue mills with a combined capacity of around 300,000tpy in Guangxi, also halted production, reportedly because of a shortage of funds.

Projects delayed: For those tissue makers in operation, the market is tough, and a lot of new PMs are being delayed.

In 2012, Hengan International ordered eight 60,000tpy tissue PMs, and planned to increase its total tissue capacity to around 1.4m tpy by 2015. The first new PM was to be commissioned in 2013.

But last year the business rescheduled the move, planning that all the PMs will come online by next year, with two in 2014, four in 2015, and the other two in 2016. It started up one in late 2014 and one in January.

So far, the company has not announced an updated plan for the other PMs' startups, only saying that it will add new capacity based on the market situation and on its own sales performance.

A source close to the firm said that Hengan is insisting on its policy of not cutting prices, so it will study the market before firing up new PMs in view of the current serious oversupply.

According to some equipment suppliers, a lot of tissue projects have been delayed due to insufficient market demand and finance problems.

A domestic supplier explained that many small firms are trying to grow, but they are short on money in the context of the current weak national economy.

In the meantime, branding is not easy, especially for new players.

Tissue products are fast-moving goods directly targeted at consumers, which is a departure from how the sales of other paper and board grades work.

Baoding in the spotlight: Although the overall market is lackluster, some regional markets provide bright spots.

Mancheng County in Baoding city, Hebei province, is a hub for small tissue producers with a combined capacity of 700,000tpy. Mills there are quite near to Beijing and have long been blamed for regional water and air pollution.

In late 2013, the Mancheng mills were forced to suspend production to help alleviate heavy smog in the region.

In November 2014, these tissue plants were obliged to take downtime again to ensure improved air quality during the Asia Pacific Economic Cooperation (APEC) meetings held in Beijing.

To permanently solve the air pollution issue, the local government in Mancheng is retiring small power boilers at individual mills, and it is working to introduce a central power supply system by erecting new big boilers.

In addition to the efforts by local authorities, many mills there are also upgrading their machinery to meet stricter environmental standards.

Early this year, Hebei Xuesong Paper ordered a new 21,000tpy PM after starting up an identical one last year.

Hebei Yihoucheng Paper plans to start up a 25,000tpy tissue PM this year. It fired up its first tissue PM, also with a capacity of 25,00tpy, last year.

Equipment suppliers reported that they have received some orders from other Mancheng producers as well.

One explained that mills there are eager to erect new, efficient, cleaner PMs in response to environmental legislation and perceptions. They are aware of possibly having to quit the market if they cannot manage cleaner production.

News from RISI (www.risiinfo.com)

Kazakhstan – Local T&T business in an area with modest papermaking focus

C F Bill Burns
Senior consultant,
Fisher International

With a territory larger than Western Europe, Kazakhstan is the northern most of the five Central Asian countries that once numbered among the republics of the former Soviet Union. Sparsely populated, land-locked and located in a mountainous area lacking the forest resources to nurture strong paper making operations (Map), Kazakhstan's population is clustered around a few cities and scattered among nomadic tribes across the country. There are two paper mills of size in Kazakhstan. One of these is a multi-grade mill making some Towel and

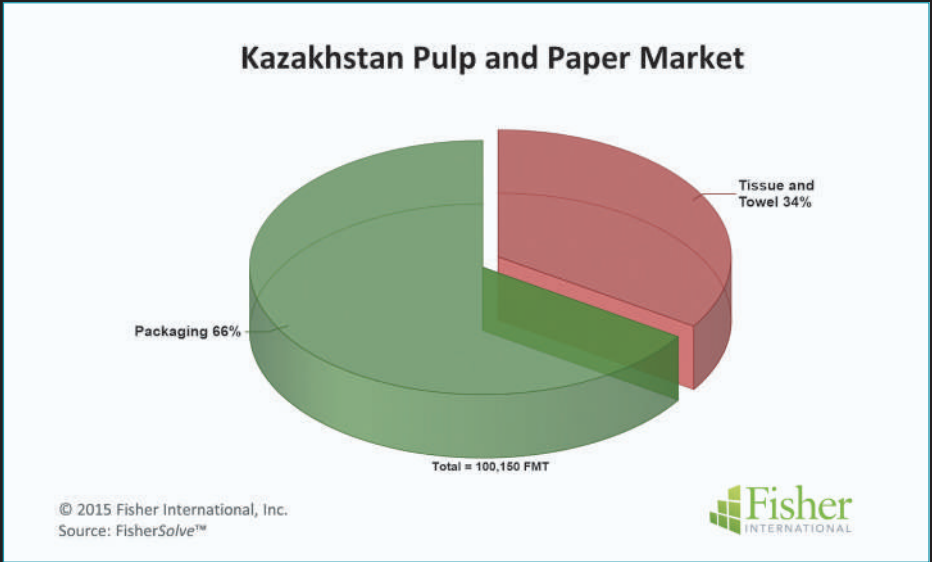


Figure 1

Tissue (T&T) along with Packaging grades. The second mill is dedicated to T&T. Kazakhstan is the only T&T producer among the five Central Asian countries. All told, the country

makes a little over 100,000 metric tonnes of paper per year of which one third is T&T with the remainder being packaging (Figure 1). There are no market pulp mills in the country.

Kazakhstan Area T&T Mill Locations



T&T SITE	COUNTRY
1	Kazakhstan
2	Kazakhstan
3	China
4	India
5	India
6	India
7	Iran
8	Iran
9	Iran
10	Pakistan
11	Pakistan
12	Pakistan
13	Russia
14	Russia
15	Russia
16	Russia

You would have to travel a long distance to find other T&T producers within the vicinity of the Kazakhstan mills. For the purposes of regional comparison in this article, we have identified 14 other T&T producers within a radius of about 2,000 kilometers in Russia, Iran, China, India and Pakistan. Collectively, they represent a diverse range of markets and machines. Within the selected area, Kazakhstan's production represents 8% of total T&T capacity (Figure 2).

The T&T market in Kazakhstan is shared by two companies Karina Paper and Kazakhstan Kagazy (Figure 3). The technology base among the 16 mills in the area is fairly diverse. Kazakhstan's machines fall in the two plus metre class with operating speed between 500mpm and 1,000mpm (Figure 4). Technical age of the Kazakhstani machines average about 25 years.

Competitive cost position in the area tends to be driven by fibre choices. Kazakhstan's fibre base is heavily weighted to recycle fibre while its counterparts use a combination of recycle, non-wood fibre and market pulp (Figure 5). On average, Kazakhstan's mix is comparable with all but the Iranian and China-based mills which, at up to \$600 per metric tonne of fibre, are at a distinct disadvantage. The Iranian mills have the lowest energy cost giving them a \$50 per metric tonne advantage over Kazakhstan and as much as \$65 per metric tonne over Russia and China in this cost category.

Nevertheless, overall, Kazakhstan has the lowest cost of the selected area mills. The advantage ranges from \$80 to \$300 per metric tonne with China's area mill being the highest cost (Figure 6).

Competitiveness must also consider a country's impact on the environment. With climate change becoming more important globally, carbon emissions have the potential to impact both cost positions and the ability to compete in the future. When carbon emissions for the mills in the region

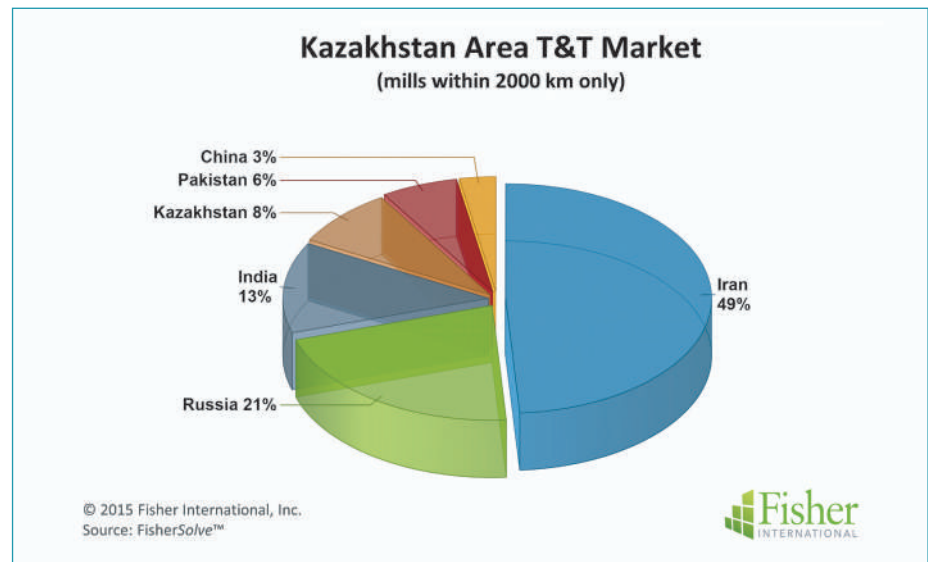


Figure 2

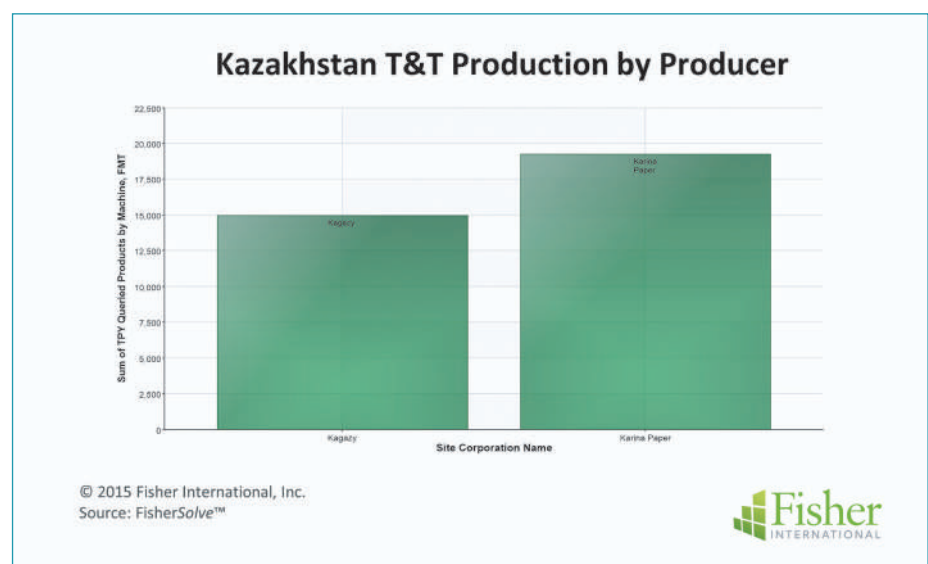


Figure 3

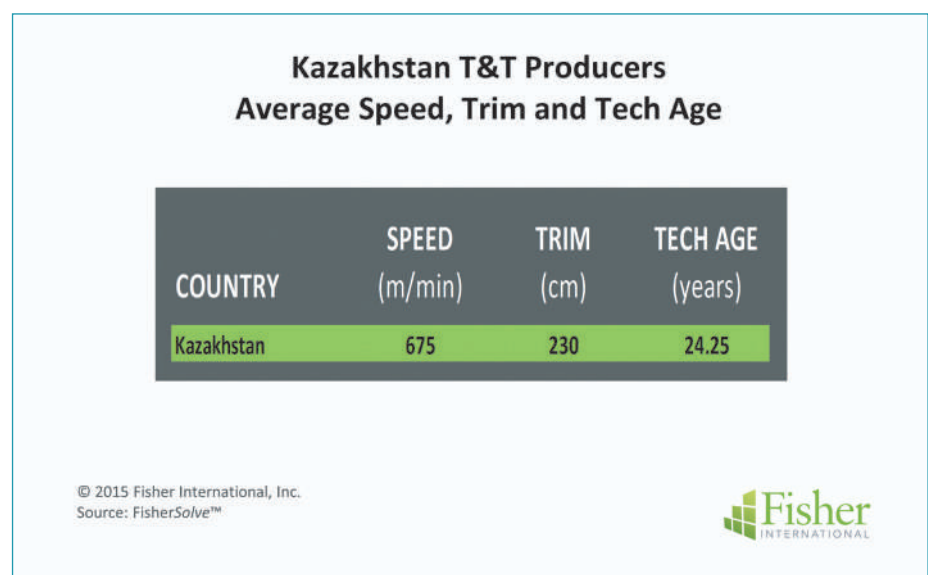


Figure 4

TWM

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By Fisher International's Bill Burns

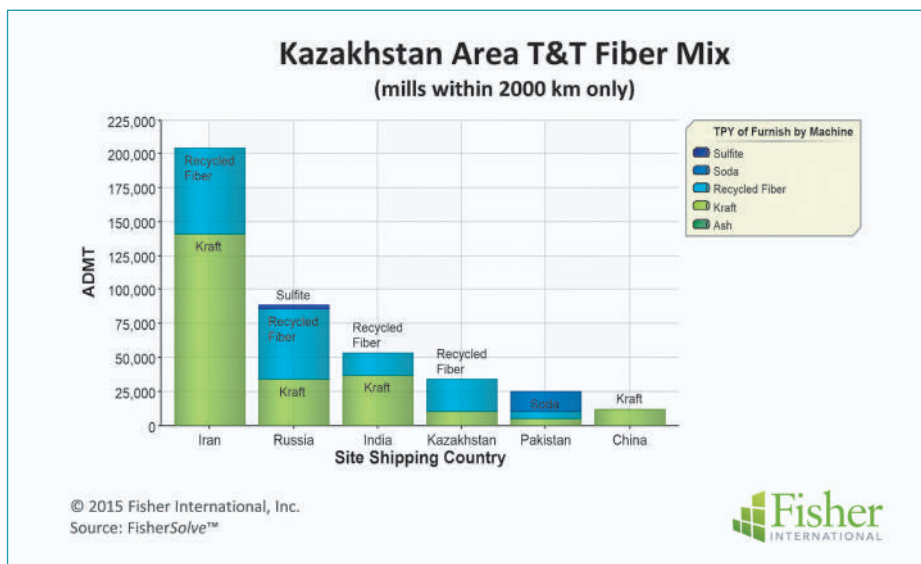


Figure 5

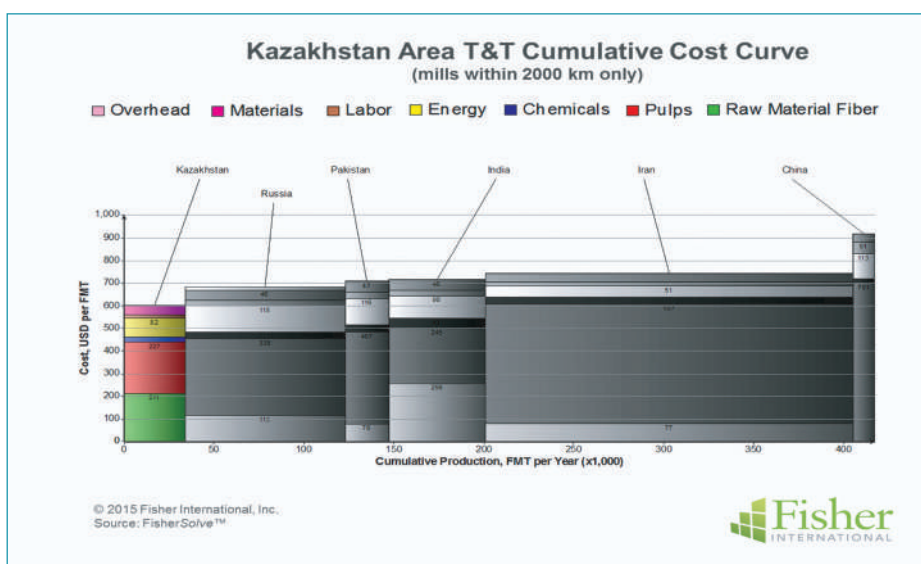


Figure 6

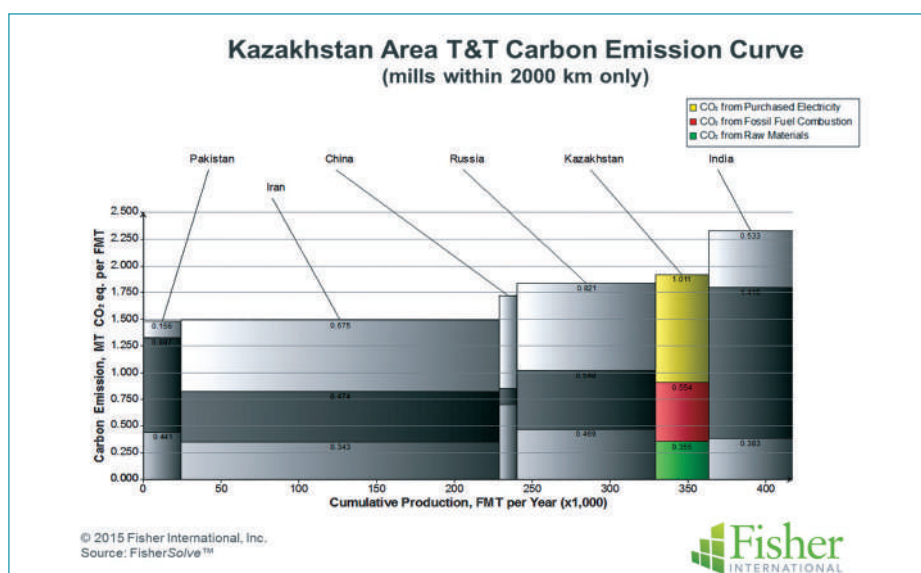


Figure 7

are modelled, Kazakhstan's T&T mills' emissions are higher than the other area mills except for the Indian mills which are significantly higher (Figure 7) and in the fourth quartile among all T&T mills globally.

The source for market data and analysis in this article is FisherSolve™. Data tables behind Figures 1 - 7 can be obtained from Fisher International. E-mail requests to info@fisheri.com.

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By Svetlana Uduslivaia, head of tissue & hygiene industry, Euromonitor International

Kazakhstan: healthy growth and opportunities ahead in consumer tissue

Although not as much in the spotlight as its larger neighbours Russia and China, Kazakhstan offers good opportunities for growth in consumer tissue. Generally a favourable environment to do business in and government efforts to encourage foreign investments have made the country a viable option for many international consumer tissue players. Furthermore, still falling well behind the developed markets in per capita tissue consumption, the Kazakh marketplace is far from saturated and provides ample opportunities for further market penetration and revenue growth.

In 2014, Kazakhstan saw healthy increases in retail and AfH tissue sales, with 4% rise in retail tissue volume and 5% rise in AfH volume. Rapid growth of the middle class, nearly universal household penetration of modern sanitation facilities in urban and rural areas and widening assortment of products facilitate consumer tissue adoption in homes. At the same time, dynamic business environment, evolving public and government facilities, and growth of horeca (hotels, restaurants and catering) provide a solid foundation for AfH tissue. Moreover, in both retail and AfH the demand is no longer limited to basic economy products. Kazakh consumers and businesses increasingly look for higher quality tissue, thereby adding to the industry's current and future revenue growth.

Evolving retail tissue

Toilet paper continues to dominate retail tissue in Kazakhstan, accounting for 86% of retail volume sales and 83% of retail value sales (US\$, constant value, 2014 fixed exchange rate) in 2014. The category recorded retail volume growth of 3%, in the same year. Consumer adoption of toilet paper continues to rise across all consumer income segments. At the same time, kitchen towels, facial tissue and paper tableware remain significantly smaller, with demand still coming mainly from urban middle and upper income households. However, the three categories outpaced toilet paper in terms of value and volume growth in 2014.

Supporting the dynamic retail marketplace is the expanding assortment of brands and products available to Kazakh consumers, ranging from economy to premium. The former are typically offered by domestic and Russian manufacturers like Karina Trading or Bumazhnyj Zavod. In toilet paper, economy products are usually single-ply and are sold in individual rolls or 2-roll packs. Premium brands, however, are gaining popularity in urban areas. Premium toilet paper typically touts ultra-soft qualities, attractive designs and packaging. It is also available in scented varieties, such as chamomile or apricot. Premium toilet paper in Kazakhstan is represented by international brands like Zewa and Kleenex.

More sophisticated facial tissue products, such as scented pocket handkerchiefs, also see increase in popularity, opening up wider opportunities for value-added product marketing. Typical consumers of such tissues are women from middle and upper income groups, who appreciate the convenience of these products and can afford to pay for it.

Found mainly at modern urban retailers, kitchen towels nonetheless recorded 17% growth in volume in 2014. Kitchen towels are used by Kazakh consumers to wipe kitchen utensils, dry hands, clean up spills or to dry fruit and vegetables. In addition, they are used in bathrooms for cleaning purposes and during outdoor activities as a napkin or food wrap. However, many consumers continue to perceive kitchen towels as discretionary luxury, and traditional fabric alternatives are still widely preferred, especially in low income households and rural areas.

Napkins enjoy growing popularity among Kazakh consumers. They are used during celebrations at home and outdoor activities. Napkins are usually available in a 24x24cm square format and come in various colours. Seasonal napkins for Christmas, birthdays and other occasions, with different prints, are also gaining in popularity. However, similarly to kitchen towels and facial tissue, middle and higher income consumers still account for the majority of paper napkin purchases.

Dynamic AfH segment

Increasing disposable incomes and general stability in the country buoyed business activity and encouraged more AfH spending by Kazakh consumers. Additionally, the country has seen a steady influx of tourists, with 2014 recording 8% increase in inbound tourist arrivals. Burgeoning business infrastructure and tourism translate into more demand for AfH tissue, which saw a 5% increase in volume of sales in 2014.

Similarly to retail, toilet paper is the largest AfH category. In 2014, the category recorded volume growth of 5%, accounting for 86% of total AfH tissue volume. As the status



Svetlana Uduslivaia
Euromonitor International's
head of tissue & hygiene industry

By Svetlana Uduslivaia, head of tissue & hygiene industry, Euromonitor International

of toilet paper is being increasingly elevated to an essential hygiene item, it is also being increasingly adopted by businesses and public facilities in cities and rural areas.

AfH paper towels accounted for 9% of volume sales within AfH tissue in 2014. Aside from growing adoption of kitchen towels as a convenient alternative to cloth towels, the category is also supported by the changing regulations. Thus, for instance, the legislation requires that medical institutions use only paper towels, instead of cloth or air-dry systems.

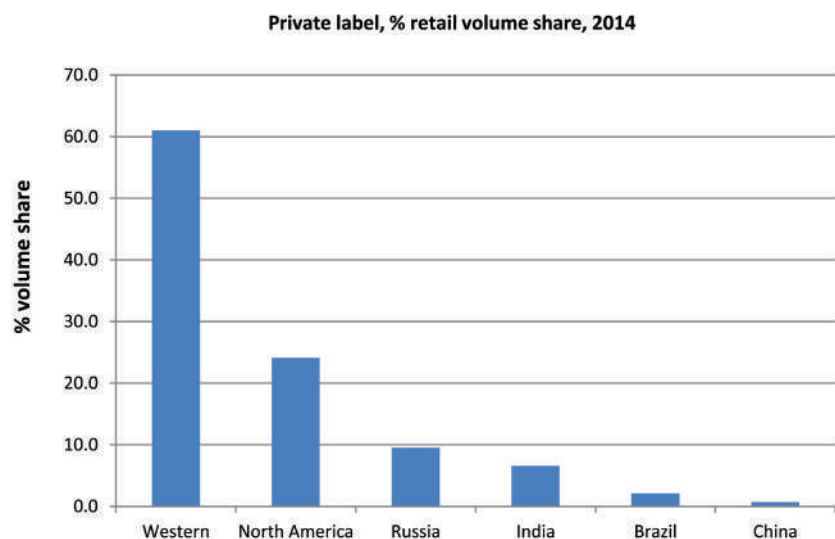
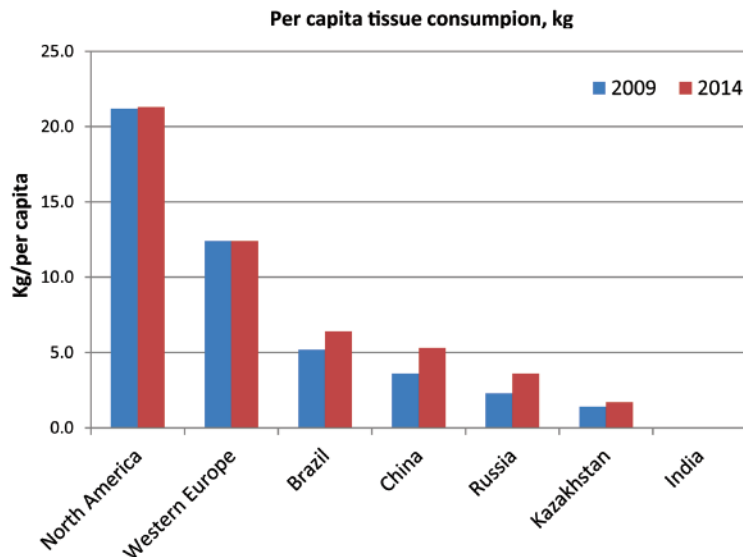
AfH paper tableware accounted for 6% of the overall AfH volume sales in 2014, with napkins accounting for most demand in this area. Steady rise in the number of foodservice outlets, especially modern chains, in Kazakhstan ensures widening customer base for paper tableware.

In Kazakhstan's AfH market international players often have an edge over domestic manufacturers, due to quality of tissue products. Modern urban trade and business centres, restaurants and hotels seek to offer the highest standards of quality and prefer to work with international companies such as Kimberly-Clark and Turkuaz Horeca Services.

Good prospects ahead for retail and AfH segments

With only 1.7 kg per capita in tissue consumption in 2014 compared to average 12.4 kg per capita in Western Europe and 21.3 kg in North America, Kazakhstan's consumer tissue market presents strong opportunities for further growth. Over 2014-2019, retail tissue sales in the country are projected to see an increase of 4% CAGR in volume terms, while AfH tissue volume is expected to grow by 5% CAGR.

Value growth is expected to see positive trend as well, as both consumers and AfH customers increasingly choose higher quality



products. However, this is not to say that economy products will lose their relevance in the coming years. While Kazakhstan has seen a significant rise of the middle class, there remains a large proportion of the population in a lower income segment which is price sensitive. Developing a wide range of more affordable quality products should certainly remain on the industry agenda, especially for categories whose consumption is still limited to urban middle and upper income households, such as facial tissue and kitchen towels.

Advancing modern retail can also provide a platform for private label development, which can satisfy the need for inexpensive good quality

products and stimulate household tissue consumption. Compared to North America and Western Europe and even BRIC countries, private label retail tissue remains negligible in Kazakhstan. This situation can open up a window of opportunity for domestic manufacturers with already solid presence in economy and standard tissue segments.

A number of local players are likely to increase their operations over the coming years in the country. However, to successfully compete with international players, domestic tissue makers require further investments into production facilities to improve quality of tissue supplied to retail and AfH markets.



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Karina poised to build on four years of 11% sales growth

When the Kazakhstan company first offered kitchen towels many years ago store buyers asked why they needed such wide toilet paper. It's come a long way since then. Greg Grishchenko reports.

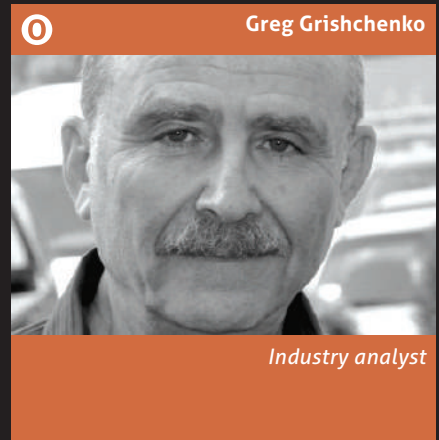
In 1991, Kazakhstan's split from the collapsing Soviet Union held many opportunities for the country's tissue industry. With growing consumerism in one of the most steady and thriving countries in Central Asia, fully integrated tissue producer Karina Trading was quick to take advantage of the steadily emerging tissue market it found itself in.

Based in Almaty, the largest city in Kazakhstan, over the past 17 years Karina Trading has provided its customers with an assorted line of tissue products that deliver an experience of modern life. The company employs 480 staff and manufactures 18,000tpy of 1 or 2-ply bathroom tissue, table napkins and paper towels under the brand names Karina, Belosnezhka, Almatynka, Narodnaya, Akva, Delfin and Abstraksia using 100% virgin

pulp and recovered fibre. The average sales growth rate for the last four years has been 11% per year.

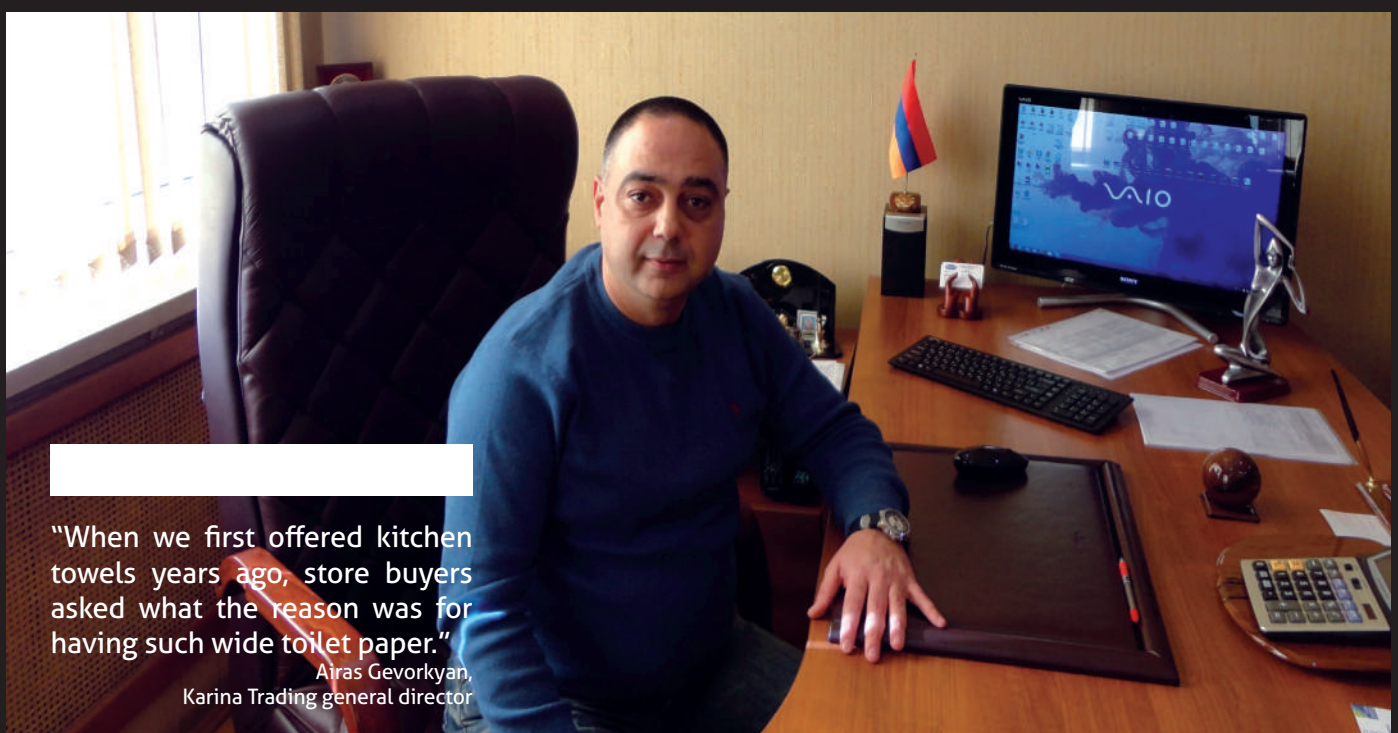
General director Airas Gevorkyan showed TWM around the mill. Discussing how the business promotes new tissue products he says: "As you may see from retail statistics, current kitchen towel sales in Kazakhstan make about 7% of the total. However, the situation is improving and more middle class customers are getting accustomed to paper towels. I remember when we first offered kitchen towels to grocery stores many years ago, store buyers asked what the reason was for having such wide toilet paper."

Established in 1998, today Karina Trading is the leading domestic producer of tissue goods in the country with over 50% share of the retail market. It was awarded ISO



Greg Grishchenko

Industry analyst



"When we first offered kitchen towels years ago, store buyers asked what the reason was for having such wide toilet paper."

Airas Gevorkyan,
Karina Trading general director

By Industry analyst Greg Grishchenko



In 2004, Karina purchased PM2, a 2.3m working width former kraft paper machine of Italian origin

9001:2008 and ISO 14001:2005 certifications in 2012, integrating the procedures into day-to-day operation. It maintains nationwide distribution, delivering its products to any city in Kazakhstan free of charge thanks to its own fleet of tractors-trailers. It has 40 products at economy and standard price ranges, also offering low cost "coreless" toilet rolls that are produced without embossing and

perforation in a natural "grey" colour. It doesn't make products for premium segments, which has a limited use for the majority of people in Kazakhstan.

The company was founded by Karen Vardanyan and Agassi Zavaryan, investors with a vision for the emerging tissue goods market under the name "Karina", reflecting their Armenian roots. While the neighbouring Russian tissue industry was developing on the basis of a powerful and already existing papermaking industry, there was a void in the Kazakhstan tissue segment that attracted small converters turning jumbo rolls into badly labelled packs of toilet paper and table napkins.

It took three years to take Karina's finances from red to profitability. Along the way the company bought additional converting lines and began using TV and radio commercials, emphasising the importance of protecting the environment and the natural beauty of the country.

The major step in the company's development was made in 2000 with the acquisition of its own paper machine after Karina began facing

difficulties procuring jumbo rolls from different sources and trying to increase productivity and improve the quality of a product. TM1 – supplied by XXXX – has a width of 1.7m and a 1.5m Yankee, which was built from parts acquired at liquidation sales from Italy to Russia. The machine still operates at 220m/min, producing 11tpd of 36-37g/m² tissue paper from recycled pulp.

'While neighbouring Russia was developing on the basis of a powerful and existing papermaking industry, there was a void in the Kazakhstan tissue segment that attracted small converters turning jumbo rolls into badly labelled packs of toilet paper and table napkins.'



Karina's coreless toilet paper Narodny

In 2004, Karina purchased a 2.3m working width former kraft paper machine of Italian origin on a loan from Alpha Bank, and used Italian contractors to refurbish its 3.6 m Yankee. The company also installed new stock preparation equipment by Czech supplier Papcel A.S. It took the record breaking time of 11 months (from stopping the running TM in Italy to start-up in Kazakhstan) to complete the TM2 project.

TM2 has been upgraded several times since 2004 with the replacement of wire, dewatering and steam box parts. After modernising the press part of the machine and introducing a new paper control system, TM2 was running at a production speed of 700m/min with up to 50tpd of 18-40g/m² white virgin or grey tissue from recycled pulp. After the latest upgrade performed in 2014 TM2 output reached to 60tpd.

Over the past few months, Karina has increased converting capacity by upgrading existing lines or purchasing new ones. Currently it operates four modern automatic napkin lines TV-503 with multiple folding options and a three-colour printing module from Omet. Other converting lines include equipment from Casmatic, Multipack (Italy) and Baosuo Paper Machinery (China). In 2013, Karina



Karina's TM2 jumbo rolls

installed an automatic packaging line by Integra (Ukraine) for its low cost coreless brands. Last year the company purchased two automating rewinding/packaging lines from Baosuo Paper Machinery for its toilet paper brands.

A competitive resources strategy means Karina is well placed for continued growth

Low production costs give it a competitive advantage based on a procurement strategy assuring the

lowest price pulp supply for both virgin and secondary fibre stock. Virgin pulp comes from Arkhangelsk Pulp Mill in Russia and is being purchased at the lowest possible price due to the Custom Union between Russia and Kazakhstan allowing free trade between two countries.

And waste paper supply is guaranteed by Karina's own collecting programme that includes its agreements with the country's major printing houses, company sponsored pick-up and in-house waste paper separation unit.



Karina's Standard product on sale in Kazakhstan

By Tissue World magazine editor Helen Morris

İpek Kağıt set to double capacity at its Kazakhstan vantage point on Central Asia and Russia

The Turkish tissue manufacturer went the extra miles to take advantage of a vast geographical region of economic and social potential. Here, TWM interviews Hamdi Yazıcı, Central Asia operations director, to get the latest.

İpek Kağıt Kazakhstan is a fully owned subsidiary of İpek Kağıt and was established in 2006 to assist the Turkish tissue manufacturer İpek Kağıt in the expansion of its exports of branded products in the region.

İpek Kağıt has initiated a geographical expansion project across Central Asia by establishing a converting plant in Kazakhstan, the fastest developing country in the region. Hamdi Yazıcı, İpek Kağıt operations director, Central Asia, says the company's Kazakhstan plant is the most modern manufacturing facility in the country and surrounding region.

The site produces bathroom tissue, kitchen towels, napkins and facial tissue under the Selpak, Solo, Silen, Servis, and Marathon brands. Its aim is to be the leader in the Kazakh market and the company aims to also take the lead in the regional tissue paper market through exports to Kyrgyzstan, Uzbekistan, Tajikistan and other neighbouring countries.

TWM/1 What is your presence in Kazakhstan? Why did İpek Kağıt decide to establish a site there?

Hamdi Yazıcı: "In line with our vision of expanding İpek Kağıt's geographic reach, we analysed the markets in Central Asia to determine which one offered the most economic and social potential for establishing a presence in the region. We decided that the most suitable market for our first investment was Kazakhstan, despite it being the farthest away from Turkey, so in 2006, we established İpek Kağıt Kazakhstan.

"Our plant in Kazakhstan, by far the most advanced production facility of its kind in Kazakhstan and the region, converts parent rolls produced at our mills in Turkey into a wide range of high quality tissue paper products.

"According to Nielsen, which measures retail sales in Kazakhstan, our Selpak brand is the leader in the premium segment of bathroom tissue and kitchen towel categories."

TWM/2 What tissue markets are you present in in Kazakhstan?

Yazıcı: "İpek Kağıt Kazakhstan is present in the consumer tissue paper market with its Selpak, Silen, and Servis brands, and in the AfH



"Kazakhstan's retail channel is developing rapidly. We plan to produce private label tissue products in the period ahead that would fit our strategy."

Hamdi Yazıcı
İpek Kağıt operations director, Central Asia



market with Selpak Professional and Marathon brands, offering high quality bathroom tissue, kitchen towels, napkins and facial tissue.

"Kazakhstan's retail channel is developing rapidly and the number of its chain stores increasing steadily. Accordingly, we plan to produce private label tissue products in the period ahead that would fit our strategy.

"Our converting plant in Kazakhstan has an annual capacity of 10,000 tonnes. We are in the process of constructing a new plant in Astana that will come on stream at the start of 2016 where we will add new converting equipment to double our production capacity."

TWM/3 Do you have plans to invest in new technology?

Yazıcı: "In line with our mission to offer consumers high quality, innovative products, we continually invest in new technology. In this regard, we have plans for new investments in the bathroom tissue and kitchen towel categories. We are developing new products and technologies with İpek Kağıt's R&D Centre in Turkey."



A selection of İpek Kağıt Kazakhstan's Selpak product range

TWM/4 What trends are you seeing in the Kazakhstan tissue market?

Yazıcı: "Kazakhstan achieved double-digit economic growth until 2007, then single-digit growth thereafter, in parallel with global economic developments. Growth rates in the tissue paper market reflected this overall trend.

"International tourism is not very developed in Kazakhstan, so growth in AfH sales is mainly driven by rising household prosperity, hence, more time spent out of the home and increased domestic tourism.

"In the retail channel, we expect the growth of chain stores to spur demand for private label in the years ahead."

TWM/5 What opportunities do you see for İpek Kağıt in Kazakhstan and surrounding areas? How much will you increase you exported products?

Yazıcı: "In line with its goal of becoming the leader of the Central Asia's tissue paper market, İpek Kağıt Kazakhstan is an active player in the region, with exports to Kyrgyzstan, Tajikistan, and other neighbouring countries.

"With the start of customs union between Kazakhstan and Russia, Russia has also become a target market for İpek Kağıt Kazakhstan. For this reason, we have located our new

The converting plant has capacity of 10,000tpy; construction of a new converting plant in Astana will come on stream early 2016



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Operations Report

0

By Tissue World magazine editor Helen Morris

plant in the strategic region of Astana and are expanding and modernizing our production capacity."

TWM/6 How is the tissue market in Kyrgyzstan, Uzbekistan, Tajikistan and Turkmenistan? What opportunities are you seeing there?

Yazıcı: "Kyrgyzstan and Tajikistan have smaller populations and per-capita income levels than Kazakhstan. Although İpek Kağıt is exporting to these countries, their share of our overall sales in the region is still very low.

"Uzbekistan has a population of close to 30 million, making it one of the most populous in the region in addition to having higher per-capita income than neighbouring countries.

"While it is quite difficult to export to Uzbekistan due to its closed economy, the country will have one of the highest growth potentials in the region when it opens its economy to international trade."

"The opening of new chain stores and entry of international players means chain stores are steadily increasing their share of the retail market at the expense of open markets and corner stores."

TWM/7 What are the main challenges and opportunities you see in the Kazakhstan tissue market?

Yazıcı: "As much as 60% of Kazakhstan's bathroom tissue market comprises single roll, paper-wrapped, low quality products. Because consumers are used to using these products, it takes time for them to become familiarised with and accustomed to using higher quality bathroom tissue.

"However, the opening of new chain stores and entry of international players in Kazakhstan's retail sector means that chain stores are steadily increasing their share of the retail market at the expense of open markets and corner stores. This development creates more opportunities for introducing new and higher quality products to consumers in the country."

Antibacterial kitchen wipes so perfect at messy meal times

With a demanding toddler to look after, self-confessed lazy shopper Gemma O'reilly, a mum and journalist who lives in west London, has had to think again about her tissue shopping needs.

I have to admit to being a very lazy shopper. Part of the reason is having a toddling one-year-old to look after who will only tolerate a very short amount of shopping time. This means I opt for convenience every time for my shopping needs.

Waitrose is my closest supermarket and, as it's where I pick up our daily food shopping, it is also where I buy all of our tissue and paper towel products.

I'm also a creature of habit, meaning that if I find a product that works for me then I always buy the same products every time. For toilet paper, I opt for Waitrose's own-brand premium range in a four-pack. This is for space reasons as I have a small bathroom with little storage and I find it harder to carry the larger packs home while also managing a pram and several bags of food shopping. I find the products are good quality, a reasonable price and there's plenty of paper. I've used branded products such as Andrex in the past, but find them over-priced, with too little paper and features such as quilting or scent which just don't appeal to me. Basic paper is best.

'I'm a creature of habit, meaning that if I find a product that works for me then I always buy the same products every time.'

The same goes for my kitchen roll choice as I tend to pick up Waitrose's own-brand, however, in this instance I always choose the recycled option. I feel it's important to make an environmentally-friendly choice when possible. And while the idea of recycled toilet paper makes me feel strangely queasy, I don't mind opting for it when purchasing kitchen roll. I find this product is a competitive price, and each roll lasts a couple of days which, with a baby and plenty of spillages, is quite a feat.

Since having my daughter, I've also started buying antibacterial kitchen wipes, again Waitrose's own-brand. They are absolutely perfect for wiping over her highchair and floor mat after very messy mealtimes, and I've also



used them regularly to clean her toys. They smell great, are a brilliant price for the number of wipes you get compared to brands like Dettol, and reassure me that they've adequately killed off any lurking germs.

It still amazes me the amount of bugs that little ones manage to pick up at playgroups or nursery. Since January we've experienced so many coughs and colds that I've lost count. As toddlers have such sensitive skin, I have opted for multi-packs of mini Andrex balsam tissues. They fit perfectly into our changing bag and are soft on my daughter's skin, meaning we've avoided sore noses after hundreds of wipes. They may be more expensive, but when it comes to buying for my daughter I never mind the extra cost.

PIX Pulp indices 26.5.2015

NBSK pulp Europe

UTIPULP (the group of European market wood pulp users) April market pulp consumption data came out showing a nice, nearly 4% increase in consumption, compared to April 2014. However, inventories were up as well by 1.2% against March 2015 and by 7.2% against end April 2014. To compensate, port stocks, published by Europulp came down by as much as 84 000 tonnes from end March. Those stocks were also down by nearly 40,000 tonnes against end April 2014.

Following the example of Asia, the downward slide in BSKP prices appears to have finished towards the end of May, and at least temporarily, also in Europe. The re-weakening of the Euro by 0.6% (weekly average of wk 21) against the US dollar sent the Euro-prices back up clearly more than the USD prices. Our PIX NBSK index in dollars moved this time back up by exactly one dollar, or by 0.12%, and closed at 852.83 USD/tonne on 26 May. Due to the weakening of the Euro against the US dollar with the reporting week's average exchange rate, the benchmark value in Euro headed higher by 5.82 euro, or by 0.77%, and the PIX NBSK index value in euro ended at 761.66 EUR/tonne.

BHK pulp Europe

In BHKP, the global and European market has remained tight while waiting for the impact of the early May hardwood market pulp supply increases to be felt on the market. The almost simultaneous start-up of CMPC's Guaiba mill and re-start of Paper Excellence hardwood BCTMP unit at Chetwynd, B.C. add jointly about 1.5 million tonnes on an annual basis, matching more or less the 2014 market BHKP demand increase over 2013. Naturally, it will take quite some time to get the product to the customers and even more time before the mills are running at their full capacities.

The narrowing of the price gap between NBSKP and BEKP to only 5 USD/tonne in China and to under 70 USD/tonne in Europe is likely to slow down the furnish change from softwood to hardwood pulp during the second half of 2015. That change was still quite rapid in late 2014/early 2015.

Our BHKP benchmark moved up this time by 3.34 dollars, or by 0.43%, and closed at 786.42 USD/tonne on 26 May. During the reporting week, wk 21, the value of the Euro depreciated by 0.6% against the US dollar (weekly average). When converting the USD-value into the weakened Euro, the PIX BHKP index value in Euro moved up by 7.51 euro, i.e. by 1.08%, and closed at 702.35 EUR/tonne.

Lars Halén

Senior manager,
FOEX Indexes

Timo Teräs

Managing director,
FOEX Indexes

Paper industry

China Paper Association (CPA) published week 21 the 2014 production and consumption figures for China's paper and paperboard sector. After a fall in 2013, modest gains were reported over the last year. Production growth in packaging and tissue compensated the fall reported now also in China in the production and consumption of graphic papers, led by a nearly 10% drop in newsprint production. Total paper and paperboard production moved up by 3.6% from 101.1 Mt in 2013 to 104.7 Mt in 2014. Linerboard with 6.9% growth, fluting with a 7% gain and tissue with a 4.4% increase over the previous year were the big winners. Paper and paperboard consumption was 4 million tonnes smaller than production, the difference being the volume of net exports and changes in inventories.

CEPI

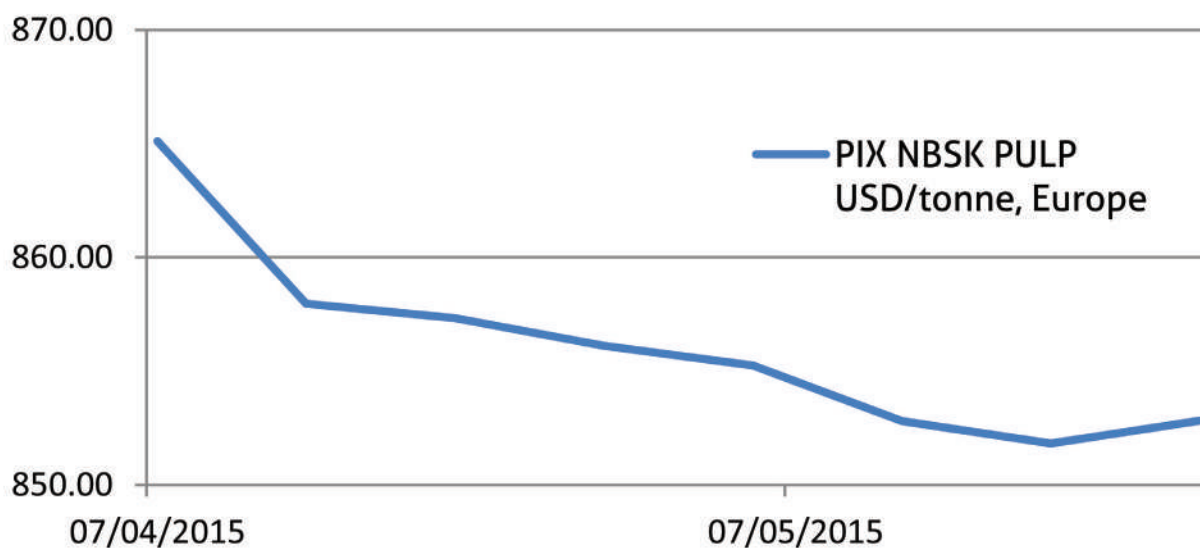
The Confederation of European Paper Industries (CEPI) published in turn its preliminary statistics on paper and paperboard production in 2014. Total production of paper and paperboard in the CEPI countries peaked in 2007 at approximately 102 million tonnes, after which the trend has been a downward sloping one. In the last two years 2013 and 2014 total production has amounted to about 91 million tonnes. The decline from 2013 to 2014 was only 0.2%.

Different grade groups recorded different changes in the produced amounts. Graphic papers, without newsprint, declined by 3% in 2014, while newsprint itself is expected to show a 7% drop in the final statistics. Packaging grades have fared better as the production rose by 1.9% in 2014. In the production of hygienic papers, there was an estimated fall of 0.3% last year compared to 2013. Hygienic papers accounted for 7.6% of total paper and paperboard production in the CEPI countries in 2014.

Source: FOEX Indexes



PIX NBSK PULP USD/tonne, Europe



FOEX Indexes Ltd produces audited and trade-mark registered PIX price indices for certain pulp, paper packaging board, recovered paper and wood based bioenergy/biomass grades. The PIX price indices serve the market in a number of ways. They function as independent market reference prices, showing the price trend of the products in question. FOEX sells the right to banks and financial institutions to use the PIX indices for commercial purposes, while RISI Inc. has the exclusive re-selling rights for subscriptions to the PIX data and market information. Please enquire for subscriptions at foexsubs@risi.com or via the following link www.foex.fi/subscribe/.

Tissue papers are produced either from virgin fibre, recovered fibre and various mixes of both, depending on the end product. High quality hygiene tissue products like medical tissue products, facial tissues, table napkins or other such household and sanitary products are often made exclusively or almost exclusively from virgin fibre pulp, whereas the share of recovered fibre typically increases in tissue products for a variety of end uses outside personal hygiene, such as kitchen towels or towels for garages or other such industrial production facilities etc. Providing PIX pulp price indices gives the paper producer and buyer insight in the price trends with a weekly frequency. PIX indices are used as market reference prices e.g.

- by banks or exchanges that offer price risk management services for pulp buyers and sellers
- by buyers and sellers of pulp or paper in their normal supply contracts
- companies who want to employ an independent market reference price for internal pricing (e.g. pulp mill – paper/paperboard mill, paperboard mill – box plant) through licensing the commercial use from FOEX.

In addition, our price indices are widely used in financial analysis, market research and other such needs by all kinds of parties linked directly or indirectly to forest product or wood-based bio-energy industries.

This way the companies have better tools to budget their cost or income structure and profitability, and may concentrate on their core businesses with less time spent on price negotiations, which tend to increase in these days as the planning span narrows in the wake of the short, quarterly business cycles and, nowadays, in most cases, monthly raw material pricing decisions.

Subscription - For access to the latest PIX Pulp and Paper index values and commentary, please subscribe to the "PIX Pulp and Paper Service" via the following link www.foex.fi/subscribe/

Is there a limit to environmental advancement in tissue's current industry model?

A purchasing manager told me recently that we have reached the limits of invention in tissue. He was wrong on all counts – on fibres, sustainability, costs and design. A dynamic technological revolution is both essential... and already heralding the next era.

For most of the twentieth century the paper industry earned the label of being a heavy polluter. During the manufacturing process, the pulp industry was not able to completely close the entire circuit, thus creating a significant contaminant flow to the sea or river.

Pulp making had closed the main cooking circuit: the wood was treated with chemicals to dissolve the lignin that binds the fibres together in the tree, and at the exit of the circuit, the cooking liquors were concentrated and burned in a recovery boiler to recover energy from biomass, and also recover some chemicals. That cycle was, and still is, closed. The problem was in the next operation. Pulp has a brown colour after cooking and in many applications the paper is required to be white, so most manufacturers proceed to bleach the pulp.

The bleaching process was performed at the time based on chlorine as a gas in the first stage, as hypochlorite in the second phase and in the form of chlorine dioxide in the final stages. After each bleaching a wash dissolves and removes the lignin chemically, so that these residues can be sent to mix with black liquor firing, which allows them to leverage its energy value. But at the same time, the chlorine content prevents recirculation to a recovery boiler. This forced the pulp industry to pour the substances into marines or rivers, despite them containing chlorine ions.

Between 1976 and 1980, chlorine-based bleaching began to transform to oxygen-based bleach, which contains ozone and peroxide oxygen, thus removing highly polluting discharges from the pulp. The movement began slowly but ultimately affected all pulp mills in the world. That was how the paper industry shook off the tag of being a highly polluting sector.

Alongside this profound change, the industry continued to invest in technology, improving energy consumption, introducing biological purification in all wastewater and radically lowering water consumption: it went from an average consumption in papermaking of 40m³/t to a much lower consumption of 8m³/t promptly to less than 3m³/t in some factories. Technology changed the paper forming, pressing and drying, introduced new chemicals that allowed the paper machines to increase their speed and improve the efficiency in the retention of fibres. The result was a dramatic decline in discharges of wastewater and a notable reduction in energy consumption.

In the 90s, there was a new emphasis for the sector on forest management and forest certification and it was gradually introduced. Today no one doubts that certification is an essential element in any paper. Possessing FSC or PEFC certification today is an indispensable requirement to enter advanced markets.

As the market improves, the paper is increasingly perceived as an environmentally friendly product, and surveys show that the future of the paper sector depends precisely on this aspect of sustainability compared to other petroleum products such as plastic or nonwoven. A future product which carries the label of being natural, renewable, biodegradable and recyclable will be accepted by most people.

However, there are still ways to advance in the market. For example, the slogan which suggests a 1 tonne paper equivalence to 14 trees implies that paper causes the disappearance of forests. This perception must be fought, explaining that while a young growing tree absorbs CO₂ an old one does not. Then, the important activity is forest management and reforestation.

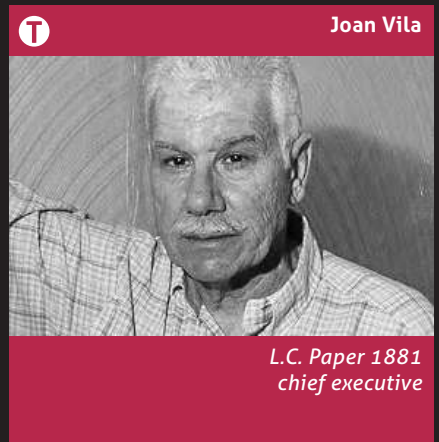
Sustainability: where next for tissue?

Tissue still has a long way to go, both in terms of design and the reduction of its key inputs. Often these concepts are interrelated and affect each other. A purchasing manager at a distributor told me recently that we could no longer invent more in tissue. However, invention is still possible in the environmental side of manufacturing or cost management. The manufacture of tissue paper has not reached the ceiling yet: the quality of the pulp can be improved, as well as the grammage, the use of energy, the amount of water used, the structure and the transport.

Raw material

When it comes to the raw material, tissue paper can be manufactured from recycled material - fully or partially - depending on the requirements of the final product. Recycling suffers today a serious supply problem because we use printing and writing paper less and less over time, so in the future it will be increasingly hard to find recovered paper grades suitable for the manufacture of tissue paper.

Furthermore raw material contains a high percentage of mineral filler (between 22% and 45%) to be removed before the paper



By Joan Vila, chief executive of L.C. Paper 1881



"Paper is a sustainable product":
L.C. Paper 1881's Besalú factory in Spain

machine, causing a serious environmental problem sludge. From this observation we studied the possibility of making tissue using old carton box as raw material. At LC Paper we have developed toilet paper, paper towel and paper napkin with this material with great results so far. In fact, we believe it is absurd to use a tissue paper whiteness of 89° to dry hands or absorb liquids or industrial fats. This concept was well developed in North America and the market accepts it.

Moreover, it is not clever use of eucalyptus pulp or pine with a high degree of whiteness to manufacture tissue paper. The high brightness of the pulp was designed to be used in writing and printing paper, with very smooth products where any point is perceived, but in the manufacture of tissue paper the light is diffused when contacting the product so it does not need the same brightness and the same degree of impurities as writing and printing paper. It would require the development of a pulp of low whiteness, for example 75°, which reflects in a design with lower pulp bleaching, less chemical usage and less chemical and morphological alteration of the cellulose fibre, thus better from a hygienic stand point, and of course from the point of view of the environment. From the Besalú factory here in Spain we have proposed to the pulp makers of the Iberian Peninsula the possibility of making this pulp, without any success. There's a potential way to develop throughout the sector.

Another aspect is to develop thermomechanical pulp incorporating it in the manufacture of tissue. Currently, the incorporation at high levels is a problem since the thermomechanical pulp, besides being rigid and thus rough, does not give enough bonds between fibres, and therefore it decreases the resistance of the product and produces dust in the creping operation, in the converting and at the end-use. The appearance of specific enzymes for this pulp can allow increased inter-fibre bonds and partially solve the problem, allowing a higher incorporation to be a big environmental step.

Grammage of the tissue

In product design the first element we take into account is the final grammage. For years there has been toilet paper or paper

towel with several layers: two, three or four, with the perception that lighter grammages allow a better softness perception. This certainty has been broken with the introduction in the tissue sector of more flexible coatings, new products that allow heavier layers and better adhesion to the Yankee, plus ceramic blades with a variety of angles available to customers. Today you can make an acceptable product with a weight of 29 g/m², often much softer than 15 g/m² made with hard coatings and low crepping.

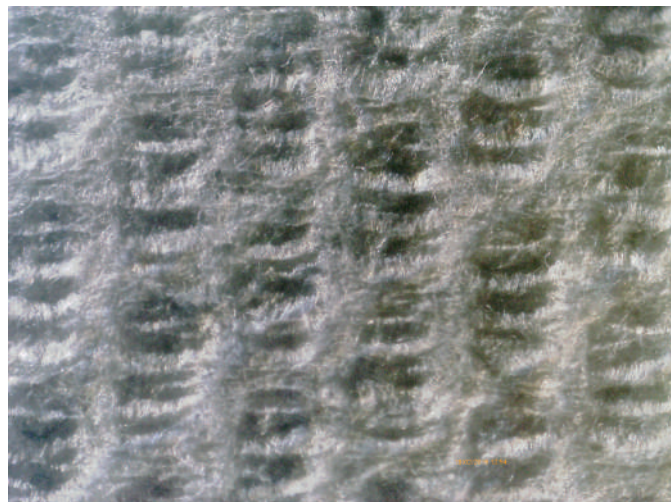
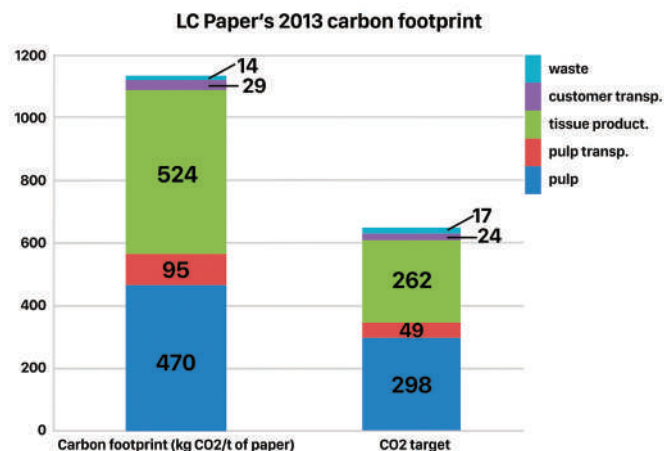
This is where the industry can make the biggest environmental jump. Manufacturing tissue with a single layer enables the final reduction of the grammage, for example making one layer of 29 g/m² instead of 2 to 17 g/m² with toilet paper or make one layer of 36 g/m² paper autocut towel instead 2 layers of 22.5 g/m². The savings are substantial, both in fibre, chemicals, energy and water. Surely it is the key to achieve a better sustainability of tissue paper. Furthermore, this design involves a very important energy consumption decrease because of the increase in the dryness of the press.

The single-layer tissue has a downside: the volume. Embossing is a major requirement for the new product, which can be solved with new approaches such as asymmetric embossing. The designs of recent decades in the manufacture of laminated tissue paper involve layers embossed on each side, resulting in a symmetrical end product. A single ply paper design involves a structured embossing. The structured paper of one layer already exists in the form of TAD, but it is possible to develop new single-layer tissue paper machines with conventional crescent former, with a much lower energy consumption.

Energy

The high grammage tissue paper exits the press with increased dryness. Rewetting depends on the type of felt and the press design. Thus if rewetting is 6 g/m², for example, a paper of 15 g/m² with 40% of dryness at the exit of the press will have a dryness of 44% when the grammage is 29 g/m². Therefore the specific heat consumption will decrease a 9%. Additionally, there is a lower energy consumption of the refining process and

By Joan Vila, chief executive of L.C. Paper 1881



A close-up example of structured one ply

therefore less heat required. In total, the decrease of energy by changing weight is a 19%. If enzymes are used for refining, this operation could no longer be needed, decreasing even more the energy bill by allowing the paper to have less fines at the same tensile.

Introducing cogeneration, increasing the diameter of the Yankee, introducing the shoe press or double press, recovering the gases after the hood and introducing a steam box, allows energy consumption figures of about 1.350 kWh/t or less for the whole chain of production, far from the conventional 3,000 kWh/t. or the 7.000 kWh/t for TAD.

Water

Regarding the water consumption, the limit is in the conductivity of the white water since a hardness greater than 3.000 µS could present problems because of the precipitation at the holes of the suction press and blocking felt. Switching from a consumption of 8 m3/t to 2.5 m3/t is possible by incorporating a retention strategy in the tissue machine. Retention up to 92% of the fibres is possible as long as the air content in the short circuit is controlled because the air bubbles increase the specific surface, preventing a good retention performance on the final product. Obviously there is a consequence to the quality of the coating layer at the Yankee by incorporating the fines at the paper, an aspect that needs to be reformulated.



"Water consumption could be 2,5m2/t": Joan Vila, chief executive of L.C. Paper 1881

Transport

But sustainability should not only focus on the manufacture of paper, it should reach the rest of the chain, especially the transport of the product to the customer. Obviously it is not possible to build a sustainability reputation for a toilet roll with only 14 m of length, 33 g/m2 and a weight of 86 g. Besides being an absurd product that can handle an average of 2.3 days of use for one person, it is a product that associates more cardboard core, more plastic in its packaging and a lot more energy in transport. A roll of 40 m, 35 g/m2 and 128 g of paper has an average of 6.7 days person use, but if a new product is designed with 80 m, 29 g/m2 and 218 g, besides a use of 13.3 days per person, it can achieve an energy consumption of 50% less in the transport and therefore a half of the CO2 emissions.

Conclusion

Sustainability is an action that requires continuity. It is an attitude, a dynamic way, which is created while advancing. When a tissue machine develops savings to a consumption of 1,000 kWh/t, we can start thinking about reaching the manufacture with zero CO2 emissions by obtaining heat from biomass and generating electricity from renewable energies such as hydro, photovoltaic or wind. At our Besalú plant we are in this phase that we call zero CO2 trend. The audit for 2013 with the ISO 14.067 standard for carbon footprint contained the following result: 470 kg CO2/t tissue for the pulp, 95.4 kg CO2/t for the pulp transport, 524.4 kg CO2/t for the papermaking, 28.8 kg CO2/t for the customer transport and 14.1 kg CO2/t corresponding to the waste. This makes a total of 1,132.6 CO2/t. We believe this value can be reduced to half with our current knowledge.

In conclusion, the tissue has a long journey to achieve maximum sustainability and this requires a complete overview of the product chain, from the composition of the fibres to the final design of the product, including a major technological revolution in the manufacturing of paper.

The road is not only possible but essential to both lower costs for the consumer and lower the consumption of raw materials like fibre, energy and water. Paper is a sustainable product: a label with increasing value.

Nuqul's Al-Sindian mill sets the standard for environmental and commercial success

Management commitment to sustainability, employee engagement, enhanced public image, competitive advantage and financial benefits... that's what taking control of natural resources has delivered for a MENA leader. Waheed Al-Qannas, operation manager for the Nuqul Group's Egyptian tissue mills, tells TWM about the site's environmental journey over the last decade.

As the leader in the Middle East and North Africa (MENA) region's field of tissue manufacturing, Nuqul Tissue now has a total tissue capacity double that of its closest rival. It operates the largest tissue machines in the region and is driven by an aspiration to become the first choice supplier of tissue jumbo rolls, as well as supplying first class facial tissue products, toilet paper, napkin paper, kitchen towel and wet strength paper to more than 30 countries worldwide.

Environmental strategy has been a key business incentive across its four tissue mills, none more so than at its Al-Sindian tissue mill based in Egypt. The technical and environmental development of the site's PM1 and PM3 has been a major step towards the growth of Nuqul Tissue and its parent company, Jordan's leading industrial conglomerate Nuqul Group.

Al-Sindian PM1 started production in March 1991, with an annual production capacity of 18,000 tonnes of first quality tissue paper. The paper machine is supplied by Valmet and has a twin wire c-former with a paper width of 2.25m. Rolls are produced ranging from 17cm to 220cm width and stock preparation contains equipment for running and sorting the waste paper, which is 100% virgin pulp.

Al-Sindian PM3, also supplied by Valmet, was initiated in January 2005 as the largest and most modern paper machine in the region, providing integrated services to Nuqul Group and producing high quality tissue as well as developing high market shares and enlarging the company's export volume. PM3 is a Crescent Former machine with a width of 5.4m, a GSM range from 12 to

25 and capacity of 54,000tpy. It produces jumbo rolls, exporting 80% to Europe and the MENA region.

Al-Sindian was designed with the highest technology in compliance with international environmental and health standards

The site is certified for FSC and this is supported by a process of continuous risk assessment for all controlled wood as needed, this guarantees continuous compliance with the FSC regulations regarding the use of controlled wood.

Waheed Al-Qannas, operation manager for the Nuqul Group's Egyptian tissue mills, told TWM that Al-Sindian started its environmental journey from the very beginning: "It was designed to generate its power from a cogeneration unit with a 12.5 MW gas turbine to reduce the gas emission and save energy and water, with utilisation of heat from gas turbine to dry the sheet in the paper machine," he says. "The site has also established effluent treatment units to reduce water and fibre-consumption



Waheed Al-Qannas



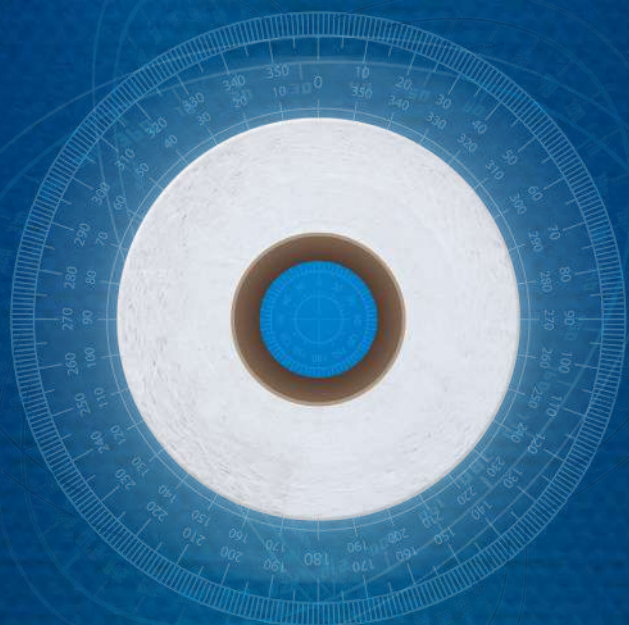
*Nuqul Group
operation manager*



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Technical Theme **T**Environment

A TWM report

During the start up in 2005, Al-Sindian implemented its environmental management system and in 2006 it became ISO 14001 certified. The move assured its management, staff, as well as external stakeholders, that following the environmental management system in all activities meant that the site's environmental impact was being well measured and improved. Al-Qannas said: "It also ensured that we were meeting the legal requirements and improving the organisation's environmental performance and achieving management commitment, employee engagement and gained a competitive advantage and financial benefits through taking control of natural resources. It also meant that we reflected on our public image."

In the same direction, Al-Sindian became FSC certified in 2008 to ensure that all used pulp in its production came from well-managed forests. Al-Qannas adds that it also ensured that the company "would not be directly or indirectly involved in unacceptable activities like illegal logging; nor the trade of illegal wood or forest products; violation of traditional and human rights in forestry operations; destruction of high conservation values in forestry operations; significant conversion of forests to plantations or non-forest use; the introduction of genetically modified organisms in forestry operations or violation of any of the ILO Core Conventions, as defined in the ILO Declaration on Fundamental Principles and Rights at Work, 1998".

'Al-Sindian continually reviews how its efficient-use policy works, makes improvements when necessary... and become the first company in the MENA region to be ISO 50001 certified.'

Since 2009, Al-Sindian has used six sigma methodologies in implementing projects to reduce consumption of natural resources such as water and fibres, reduce core consumption and electrical and thermal energy consumption which achieve great sustainability results.

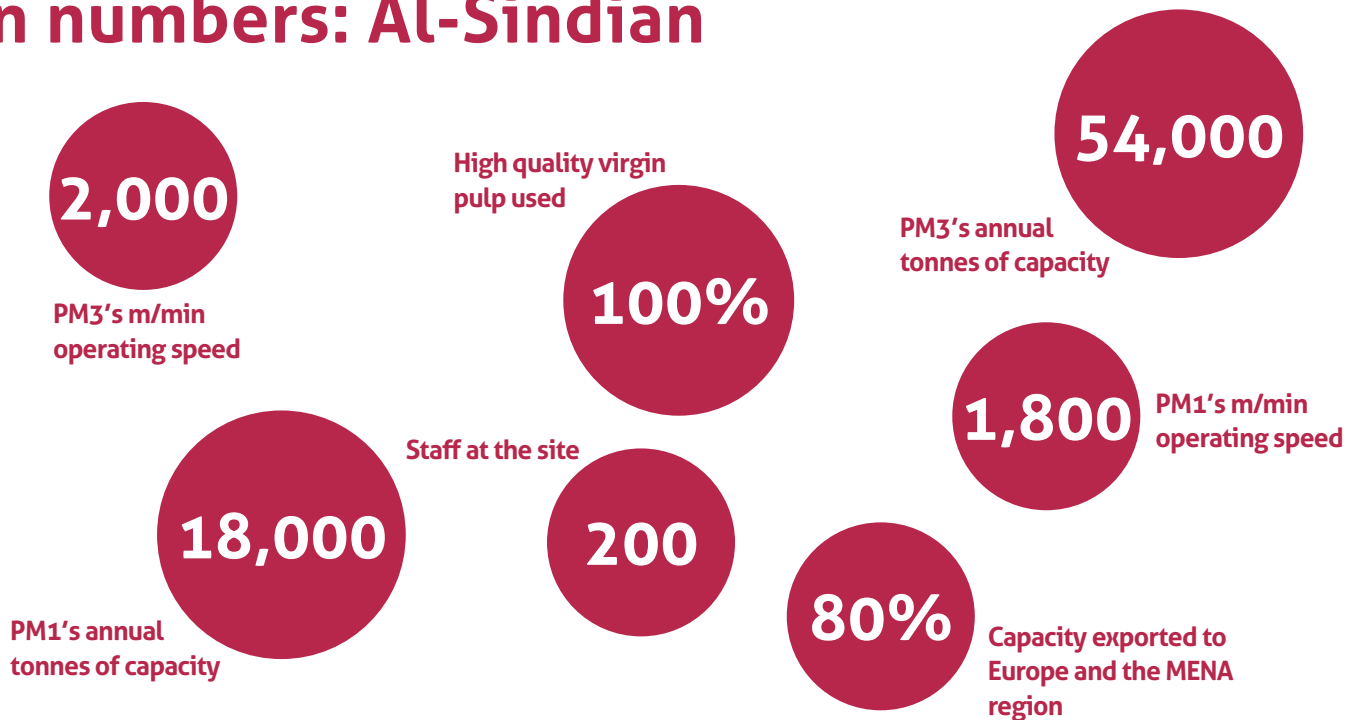
In particular:

- **In 2012, Al-Sindian has continued in using energy efficiently to save money as well as helping to conserve resources and tackle climate change**

The site has developed a policy for more efficient use of energy, fixed targets and objectives to meet the policy, used data to better understand and make decisions about energy use, measure the results, review how well the policy works, and continually improve energy management system and become the first company in the MENA region to become ISO 50001 certified. It has also implemented many saving projects in the energy field as well as installing the latest energy management software to perform the related activities in structured and organised ways.

- **In 2013, Al-Sindian succeeded in changing its tissue structure from the conventional composition of 60% eucalyptus short fibres and 40% softwood long fibres to 100% eucalyptus fibres**

In numbers: Al-Sindian



Al-Qannas says this was an innovation that opened up new paths towards sustainability as eucalyptus comes from trees that are grown on upland landscapes, and so they reduce demand on environmentally sensitive areas. He adds it is widely available globally and also produces 10 tonne of pulp per hectare/per annum compared with 1.4 tonne per hectare/per annum for softwood.

"It lends itself to agro-forestry, whereby annual crops such as corn, wheat, watermelon and sunflower are grown in conjunction with the eucalyptus," he adds. "Due to the fast growth of eucalyptus plantations trees, the trees also remove carbon dioxide from the atmosphere and store carbon in plant material and soil. Eucalyptus trees also have a higher biomass than softwood trees, and this means higher CO₂ emissions are removed. Most eucalyptus plantations are also accredited by the FSC."

At Tissue World São Paulo in May, Al-Qannas gave a talk on the development of reducing environmental impact while also maintaining high quality products, reducing manufacturing costs and improving business performance. Entitled "100% eucalyptus and cogeneration are the best practices to reduce operation cost", the talk discussed how the main and primary raw material in the tissue industry is pulp, which typically constitutes over 65% of the company's manufacturing cost, so the types of pulp used and the pulp recipe have a large effect on its variable cost.

Al-Sindian's project studied the possibility of modifying the tissue structure design by focusing on using 100% eucalyptus pulp instead of the regular composition percentage of the furnish (softwood, hardwood and eucalyptus).

The main scope was to reduce the softwood fibres consumption by replacing it with 100% eucalyptus fibre to achieve sustainable tissue product design which ensures a continuous improvement in business through measurable improvement in its manufacturing costs, customers and environment.

It found that:

The project changed the tissue structure from conventional composition of long and short fibres to 100% eucalyptus fibres, which is innovating paths towards sustainability.

More eucalyptus:

- Gives an opportunity to reduce manufacturing costs
- Excellent fibre for tissue paper manufacture
- Reduces energy consumption in the tissue mill
- Gives greater flexibility in fibre selection
- Improves tissue quality
- Lowers pulp inventory requirements

Main problem identification: how to improve tissue sheet quality via softness, formation, structure, and also to improve and reduce pulp costs and the amount of energy using 100% eucalyptus in furnish without negatively affecting other specifications such as:

- Dust levels increase
- Tensile strength reduction
- Caliper and elongation reduction
- Machine efficiency reduction

The result of many successful brainstorming sessions resulted in: Production of sellable standard facial and toilet tissues with 100% eucalyptus

Al Sindian succeeded in having an alternative of softwood pulp
Improvement in tissue formation
Improvement in tissue softness
Reduction in dust level.

Benefits:

Quality: Better formation, higher softness levels, more closed sheet structure

Business: Improved market share, improved full supply chain cycle and contracts, lower pull cost, enhanced customer satisfaction

Environmental: Better land utilisation, lower energy consumption, highly maintained sustainability.

The Barometer Issue - One year on... you report back on your progress

In 2014, TWM visited a number of mills from around the world – from Argentina, Mexico, Benelux, Italy, East China and Russia - for the magazine's Country Reports. Here, we revisit a selection to see what has changed.

ARGENTINA

Celulosa Argentina

Despite the economic crisis which impacted Argentina in 2000, when TWM met high quality BEK pulp producers Celulosa Argentina at the end of 2013, the company was moving into the tissue sector as a result of the rapid growth seen in the market.

Its motivation was simple: tissue in the region was emerging more and more as a recession-proof market. Coupled with the fact that Celulosa Argentina was the only producer of high quality BEK pulp in Argentina (giving the business key logistical synergies throughout the country and into neighbouring markets), the move made good business sense.

In April 2015, it was reported that Celulosa Argentina had started production on its new 30,000tpy tissue PM at Capitán Bermúdez. The Voith-supplied tissue line has a wire width of 2,760mm and runs at 1,800m/min, producing 15-21 g/m² basis weight toilet tissue and kitchen roll from virgin fibre.

Papelera San Andrés de Giles (PSAG)

Based in Papelera, on the 18 May 2015 the family-run mill started up its new Tango converting line, installed in response to the opportunities seen in the local tissue market.

Andrés Gagliardi, who heads up the sales department and is the grandson of the company's joint founder José Sassone, says the technology, JOI 012, is the first ever embosser to feature a steel marrying roll instead of the industry standard rubber roll. It will produce new products for the business, a kitchen towel and toilet tissue. "We're also doing four-colour printing with the Futura line," he says. "We're seeing an increase in demand for 2-ply products, simply because people have more money now and are beginning to consume different sorts of products." The site now manufactures 18,000tpy of toilet paper and napkins, has its own brand, sells to the AfH market and also produces private label products for companies such as Walmart and Carrefour.

Another growth area is environmental products: "It's one of the main reasons there's growth here," he adds.

The business is still on the lookout for a third napkin line

and plans to make the investment by 2015.

"We are seeing a big increase in demand for napkin products in Argentina," Schiaffino says. "This demand has mostly come from some tissue production leaving the market here."

Helen Morris



Editor,
Tissue World magazine

MEXICO

Fabrica de Papel San Francisco (Fapsa)

With the great potential for growth in the Mexican tissue market, coupled with the country's geographical access to the tissue giant on its shoulders as well as the dynamic potential of South America, it was no surprise when the world's first Advantage NTT tissue line was started up by a Mexican company.

The start up of the line at Fabrica de Papel San Francisco (Fapsa)'s site - located on the Mexican/US border - boosted the company's premium export drive to the USA.

As TWM was going to print, the world's second NTT line, a 2.6m wide Metso-supplied machine, was in the start-up process at fellow Latin American company, Chile's Forestal y Papelera Concepción. The new line will add another 30,000tpy of bathroom tissue, napkin and towel grades to the company's existing production.

Since Fapsa's start-up, Dario Palma y Meza Espinoza, director of operations at the family-owned business, tells TWM: "We are very happy with the development of the NTT machine into our production strategy, both in structured and conventional paper. In conventional mode, we have achieved a production of 180 metric tonnes in 24 hours, certainly an outstanding level and most probably a world record for a 2.6m wide tissue machine".

The company now produces 167,000tpy and the new tissue machine joins four others: PM1 (1968 Manchester), PM3 (1999

Voith), PM4 (2004 Metso) and PM5 (2009 Metso). It has 11 bath and towel converting lines, three from PCMC Italy and eight from Perini plus several napkin and folded towel machines, mostly from Bretting.

Fapsa has a market share of 11% in the Mexican tissue market and Palma y Meza says any further growth will be organic. Growth in the private label and retailer brand sectors will also be key drivers for the business.

SCA Mexico

When TWM met SCA plant director Roberto Deleón at the company's impressive site in Sahagun City, he made it evident that there was "plenty of room for expansion" over the 1,003,000 m2 plot of land. At the time of visiting in February 2014 the site was new, having started production four years earlier as part of a US\$210m investment. A further US\$10m had since been invested to create a new distribution centre that Deleón says enables the company to be "more efficient in cost and prepare for market needs".

The company's target regions are across Mexico and Latin America – markets where the middle class is growing steadily and increasingly have access to disposable incomes. Deleón says Mexico is still seeing big growth in terms of tissue use, which is keeping pace with the growing Mexican population, that is increasing 1.2% year on year.

AfH is still one of the most important sectors as the country continues to see a big increase in tourism.

Within this market environment the site and business is pioneering: "With our efforts here, we are working to become a

global benchmark in terms of efficiency with our paper machine and converting facilities," he says. "Competition here is tough. We have all of the big players here. And a lot of new capacity is being introduced. So we're building brands and innovating."

SCA started business in Mexico 35 years ago and now has five plants in the country, three tissue mills and two hygiene mills that employ 2,600 people. The business claims the number two consumer tissue spot in the Mexican market, which has almost all of the key players in competition; SCA and Kimberly-Clark claiming the first and second spot.

The Sahagún site has one PM, a Metso-supplied machine that produces 60,000tpy. There are four converting lines from Perini and KPL at the site. Some 85% is used in the domestic market while 15% is sent to Central America, all of which is finished product.

BENELUX

Van Houtum

In April 2014, Van Houtum was targeting itself as a small niche player looking for an opportunity to grow. Managing Director Bas Gehlen says the plan for the company, which at the time was exporting finished product to 25 countries and with annual turnover of €65m, was looking to grow step by step.

Just over a year later, and Van Houtum has taken yet another step. It has signed a ten-year purchase contract with a Dutch supplier of elephant grass (*miscanthus giganteus*). Van Houtum's process technologists have been able to make cellulose from the elephant grass and that means they can make hygienic paper from it. Furthermore, the company ran



Converting lines at Van Houtum's site in Swalmen, The Netherlands



The €3 million wastewater treatment plant at Sofidel's Delicarta paper mill was a first in the paper tissue industry

trials with processing drink cartons. Gehlen adds that re-cycling drink cartons deliver good usable fibres that are ideally suited for the production processes. And in addition, the other waste substances that are generated, aluminium and plastic, can be reused very easily by third parties. The company has also just signed for the investment in a stock preparation line, which will be operational early next year.

"Using local waste flows as raw materials for our production helps building a circular economy," Gehlen says. "We predict a significant reduction in the availability of recovered paper in the longer term so we continue to look actively for alternatives."

In January, the company also announced it has signed up Toscotec to deliver a dry end rebuild of its PM 4 tissue machine in Swalmen, The Netherlands. The start-up of the rebuilt machine is scheduled for the third quarter of 2015. The purpose of the rebuilding is to implement machine efficiency, reliability and safety in operations. Toscotec's delivery includes a new reel TT Reel-P that will replace completely the existing old one. The new machine parts will be designed for an operative speed up to 1,800mpm with a paper width of 2,600mm.

Gehlen emphasised the company is seeing a lot of potential all over Europe. It now produces products for toilet areas such as washing solutions that include tissue dispensers, an area he adds is thriving as more and more businesses start to care about their bathroom area.

The 200-staffed plant now manufactures 45,000tpy and has an annual turnover of €65m.

ITALY

Sofidel

At Sofidel's Delicarta paper mill in Italy, the main investment made since TWM's visit has been the start up of a new wastewater treatment plant. It reduces the amount of clean water extracted from the groundwater table and makes it possible to recover up to 75% of wastewater, saving 350,000 m³ fresh water annually.

The process involves three phases: In the first phase the wastewater undergoes a biological process. In the second, for the solid-liquid separation, it undergoes a ultrafiltration section (this treatment takes the name of the MBR -Membrane Biological Reactor). The third and last phase, aiming at eliminating the remaining salt fraction, consists of a reverse osmosis system.

Sofidel says that the overall investment for the implementation of the project - the first in the paper tissue sector - was €3 million.

'The wastewater treatment plant makes it possible to recover up to 75% of wastewater, saving 350,000m³ of fresh water annually.'



The Tissue World series of events, conferences and publications is the meeting point for the tissue industry, attracting key tissue professionals, tissue makers, suppliers and retailers offering a unique opportunity for them to network, do business and learn. Tissue World also focuses on product innovation, sustainability, distribution and trends and provides actionable content for buyers and decision makers.



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Convention Center (Hall G)
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Trade Show & Conference:
27 - 29 September 2016
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Istanbul, Turkey



Trade Show & Conference:
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Shanghai, China



Trade Show & Conference:
28 - 30 March 2017
MiCo - Milano Congressi
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Trade Show & Conference:
7 - 9 June 2017
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After major upgrades to Wepa Italia's Cassino factory's infrastructure, further investments will focus on converting and are foreseen in the course of this year

WEPA Italia

As of 1 February 2015, WEPA Italia managing director Bernhard Gross tells TWM that the company now owns the property of its Lucca converting operation at Salanetti, Capannori. "With more than 40,000sqm of modern industrial buildings and extensive grounds, this acquisition can support future growth plans of Wepa Italia," he says.

Furthermore, after major upgrades to the Cassino factory's infrastructure, it now shows up in line with the company's corporate design. "Further investments will focus on converting and are foreseen in the course of this year," he adds.

When TWM met Gross at the company's Capannori-based site in Lucca in 2014, Gross was just six months into the job. Prior to his joining, the company had restructured significantly. The ongoing investments and prioritisation of the company's three Italian tissue sites (Salanetti in Capannori, Fossa Ralletta, and Cassino), shows Gross's commitment to growing WEPA's presence in the Italian marketplace.

EAST CHINA

Hebei Yihoucheng (YHC)

When TWM met Hebei Yihoucheng at the company's mill in Baoding, Hebei, a two-hour drive from Beijing, it had just recently moved into the tissue market in May 2014 with the start up of 25,000tpy Andritz-supplied PM1. A second 25,000tpy tissue PM was expected to start up in 2015 while PM3 and PM4 were planned to come on stream in the next four years as part of a 2bn RMB investment that aims to produce 200,000tpy once completed.

"There are many small tissue mills but the paper quality from YHC is the best. We are also seeing new demands for tissue projects that need thicker paper, for example hand towels."

Hebei Yihoucheng general manager Tian Yuwei

General manager Tian Yuwei epitomised China's economic drive with advanced technology in place and planned, a top class targeted product, and a strategy aimed at changing the tissue culture across a vast region of the country. Its strategy was to take a large portion of the facial tissue market in northern China. The site is located over 600 (Chinese mu) acres – and there is plenty of room for expansion.

In June 2015, the company's expansion plans are well on the way: TM2 has been ordered and expected start-up is at the beginning of 2016. The new investment of TM3 is also in the pipeline. Yuwei told TWM: "For the local competition there are many small tissue mills but the paper quality from YHC is the best. We are also seeing new demands for tissue projects that need thicker paper, for example hand towels."

RUSSIA

Pulp Invest

The staggering growth potential of the Russian tissue market shows no sign of slowing down. When TWM went there at the end of 2014, the tissue mills visited were discussing tissue growth at the impressive and continuous rate of 20-25% per year.

Pulp Invest, which we visited in Kazan, the capital and largest city in the Republic of Tatarstan, said this potential was evident in the increase in demand for high-quality toilet rolls, kitchen towels and napkins in the local region. The company had recently invested in an Andritz-supplied PrimeLineCOMPACT II tissue machine to meet this expected demand. Recent increases in disposable incomes had seen consumers trading up and starting to use new tissue products.

This gap in the marketplace was recognised by Pulp Invest when it formed in 2012, and with the start up of the Andritz line in May 2015, it is targeting the private label and own brand markets.

Chairman of the board Stanislav Averyanov told TWM: "The start-up took much longer than expected. So now we just are making our first steps in selling the product. At this stage it's too early to talk about new markets, further investments, etc."

The machine has a design speed of 1,700m/min and a width of 2.8m and the Yankee is manufactured entirely of steel and has a diameter of 3.6m. At full capacity it will produce 30,000tpy of high-quality toilet rolls, kitchen towels and napkins, which will then be converted into rolled products. Converting takes place on site on an Amica line supplied by PCMC and an Omet line.

Hayat Kimya

Walking around Hayat Kimya's impressive tissue site in Alabuga, Tatarstan, was a unique experience for TWM. It was not just the scale of the operation – easily pulling its weight

'The challenge was for production on Hayat Kimya's 5.6m Valmet-supplied TM to start before the winter set in, when staff could face working in temperatures as low as -30 degrees and six months of snow.'

in Russia's second largest industrial complex, and area that housed the country's finest and most ambitious companies.

It was also the timescale that paper group director Lütfi Aydın and plant director Ergun Gungelen were operating under.

The challenge, crucially, was for production on the 5.6m Valmet-supplied Advantage DCT 200 TS TM to start before the winter set in, when staff could face working in temperatures as low as -30 degrees and six months of snow.

During our visit at the end of 2014, the Russian site was looking very near to completion. It was made official on 13



Converting facilities at Hayat Kimya's Alabuga, Tatarstan-based site



As of February, Hayat Kimya has started to run the tissue machine and converting lines 24 hours a day.

December 2014 when the company started up the tissue machine and the Perini-supplied converting line was started up in January 2015.

Aydin told TWM: "Our tissue machines run full time and fortunately we have achieved our targets regarding quality and runnability. We launched our products in the Russian market in April and we have been continuing to put our highly qualified products onto the shelves in the markets and shopping centres. We are happy with our operation at Alabuga and we hope that we will have a good market share shortly in the Russian market."

Dynamic economic growth in Russia coupled with massive consumer markets and a unique geographical position had led the Turkish tissue giant – already the largest tissue manufacturer in Eastern Europe and the Middle East – to take advantage of opportunities in near-neighbour Russia.

Higher quality soft, absorbent and resistant tissue products are its key strategy in a rapidly changing market.

As Russia's middle class continues to get stronger, Aydin adds the company will increase its presence in the country and look to sell more and more into the Moscow and St Petersburg markets.

And his parting comment, when TWM was leaving the site, was the potential to invest in another paper mill in Russia within five years.

"We now have a tissue production capacity of 210,000tpy, which means the biggest capacity in Turkey, Middle East and Western Europe, excluding Russia."

Hayat Kimya paper group director Lütfi Aydin

Elsewhere, Hayat Kimya has also expanded its Mersin mill in Turkey and Aydin says the company started up the tissue machine on 17 March.

He said: "We now have a tissue production capacity of 210,000tpy, which means the biggest capacity in Turkey, Middle East and Western Europe, excluding Russia."

At the company's Yeniköy mill in Turkey, a big overhaul and modification on PM1 is planned. The existing cogeneration hood will be replaced with a state of art hood similar to the ones running in Russia and Mersin. A Visco Nip will also be installed instead of suction press roll.

At the company's Egyptian mill, the business is still purchasing machinery and equipment and erection is planned for 2016. Aydin adds that the company is determined to continue its investments in new plants.

Watch this space.

Intercontinental growth – tissue parent roll trade pushing back the boundaries

A global tissue business in excess of 2.6 million tonnes a year and providing 35% of all tissue sold internationally, bulk parent roll trade offers new potential and a chance to sell overcapacity. But will they find enough clients to maintain the growth?

It is a fact that tissue products due to their high bulk do not normally travel long distances like other paper and board grades. This means that most of the international trade is between the neighbouring countries. Global tissue imports and exports were in the range of 7.2 million tonnes in 2013 and probably reached 7.5 million tonnes in 2014 (our estimate as some trade statistics for 2014 are still missing). International trade accounts for about 22% of global tissue consumption.

However, in recent years international tissue trade has grown slightly faster than tissue consumption. From 2003 to 2013, global tissue consumption showed an average growth rate of 3.4% per year - this average suffered from the low 1.2% growth rate in the Great Recession year 2009 - while international trade has grown by about 4% annually during the same period. The most interesting feature during this time is that intercontinental tissue trade has grown faster than pan-continental trade. New export-oriented capacities built in Asia, mainly in China and Indonesia, and the MENA region, particularly in Turkey, Egypt and the United Arab Emirates, have been the main reason for the rapid increase. A large part of this new capacity delivers mainly tissue parent rolls to converters around the world. In the following the global tissue parent roll business is discussed in more detail.

Based on statistics collected by RISI, the global tissue parent roll business reached about 2.6 million tonnes in 2014. This means that about 35% of all tissue sold internationally is delivered as parent rolls, which can be transported longer distances than the main part of converted tissue products - roll towels and toilet tissue are the bulkiest goods, taking up considerable space in relation to their nominal weight; hence, transport costs are high. The international parent roll trade has clearly grown faster than tissue

consumption or the tissue trade in total. In the past five years, the growth rate of parent roll imports and exports has averaged almost 7% per year compared to growth in the trade of converted tissue products of 4% per year.

The top 10 tissue parent roll exporters account for approximately 68% of the global total (Figure 1). Italy and Indonesia are the two largest suppliers; in 2014 Italy had slightly higher parent roll exports than Indonesia, while in 2010-2013 Indonesia took the top position. Italy is the pan-European supplier of tissue parent rolls. Western Europe accounts for 63% of its total exports and Eastern Europe for 31%, leaving only 6% for deliveries into other regions. About



'APP is the largest tissue parent roll supplier worldwide, built on export-oriented capacity in Indonesia and from its Chinese mills.'

half of Indonesian tissue roll deliveries go to other Asia Far Eastern countries, China and Japan, 22-23% to North America, 13% to Oceania, 11% to the Middle East and the remaining 3% to other regions. Deliveries to Western Europe are minimal. Indonesia's parent roll exports fell by more than 30,000 tonnes in 2014, primarily because of lower sales in the Middle East, in the United Arab Emirates and Iran, in particular, and North America (which is not shown by the US import statistics, so there may be an error in the Indonesian statistics).



China and Turkey are the third- and fourth-largest tissue parent roll exporters, respectively. China's largest trading partner is Oceania (31%), followed by Asia Far East and Japan (18%), Europe (15%), North America (12%) and the Middle East (9%). China delivers to all parts of the world, including Latin America and Africa. Turkey's tissue parent roll exports decreased by about 17,000 tonnes in 2014, most of which was caused by sporadic deliveries to the USA in 2013, which did not repeat in 2014. The United Kingdom and Israel are the two most important trading partners for Turkey.

Of the individual companies, we claim that Asia Pulp & Paper (APP) is the largest tissue parent roll supplier worldwide, although we do not have any exact numbers by company. APP has built export-oriented capacity in Indonesia, and also delivers parent rolls from its Chinese mills to customers abroad. Several Italian companies are involved in the parent roll business, including larger groups such as Sofidel and IC Tronchetti, but part of their exports are internal (captive), going to their own converting plants in other countries. In China, one large PM of Hengan is reportedly dedicated to parent roll deliveries to just one major client in Australia.

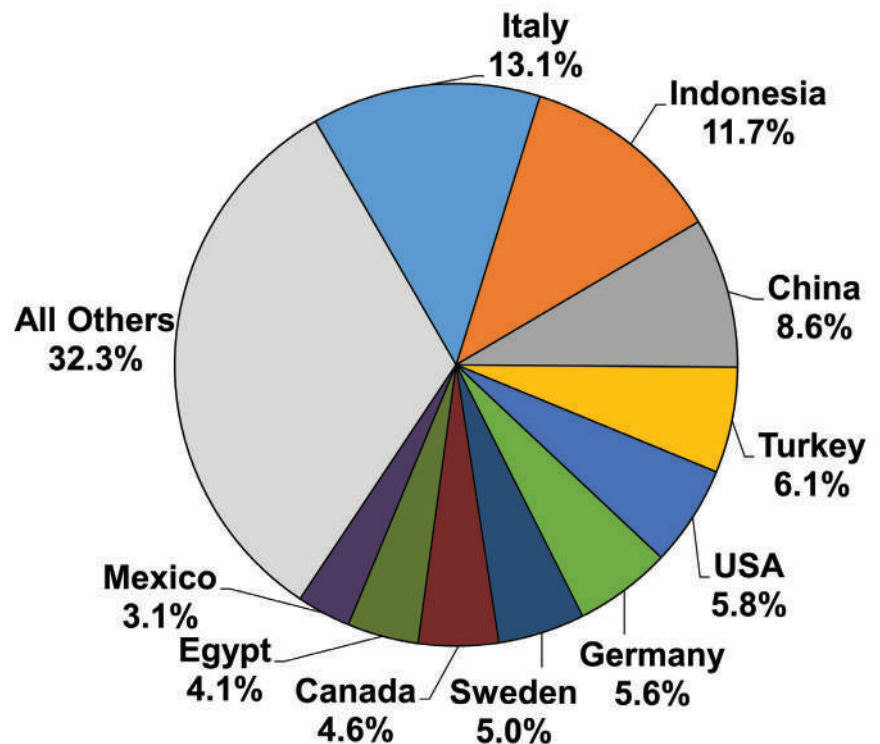
The import business of tissue parent rolls is clearly more fragmented than the export business: the top 10 importers account for about half of all deliveries compared to more than two-thirds of the top 10 exporters (Figure 2). The USA is the largest importer with its main sources being Canada, Indonesia, Mexico and China. The United Kingdom has a crowd of independent tissue converters importing parent rolls, with the main trading partners being Turkey, Italy, China and Germany. Germany is also a major importer but the majority of the volume is captive and/or transit business as there are very few independent converters with the exception of the napkin business. Australia and Hungary complete the top five parent roll importers.

'It is likely that parent roll trading will continue to grow, but will there be a sufficient number of clients for new deliveries?'

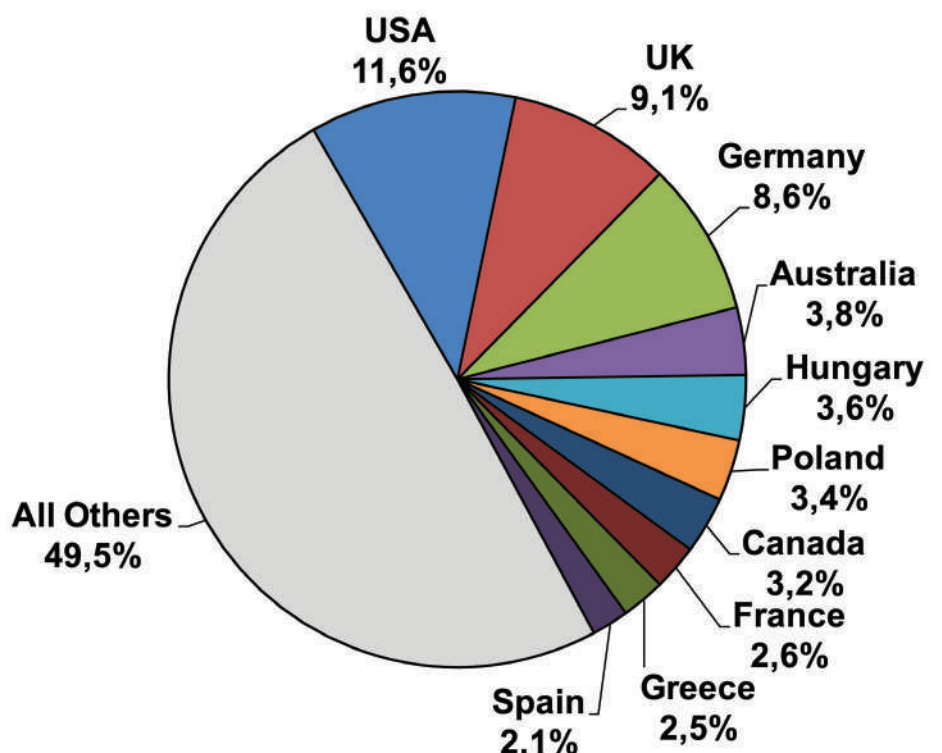
ABC Tissue is the largest importer in Australia with rolls coming mainly from China, followed by Indonesia and Vietnam. Hungary has a number of large converters which need imports as the domestic tissue industry is weak and cannot fulfill the parent roll needs of all converters. Hungary's main import sources are Italy, Germany, Romania and Sweden.

What can be expected in the coming few years? Considering all the new tissue projects worldwide, it is likely that parent roll trading will continue to grow. The main question is whether there is a sufficient number of clients for new deliveries. The decline in parent roll supplies from Indonesia and Turkey in 2014 is a worrying sign that perhaps it is not that easy to sell overcapacity as parent rolls abroad.

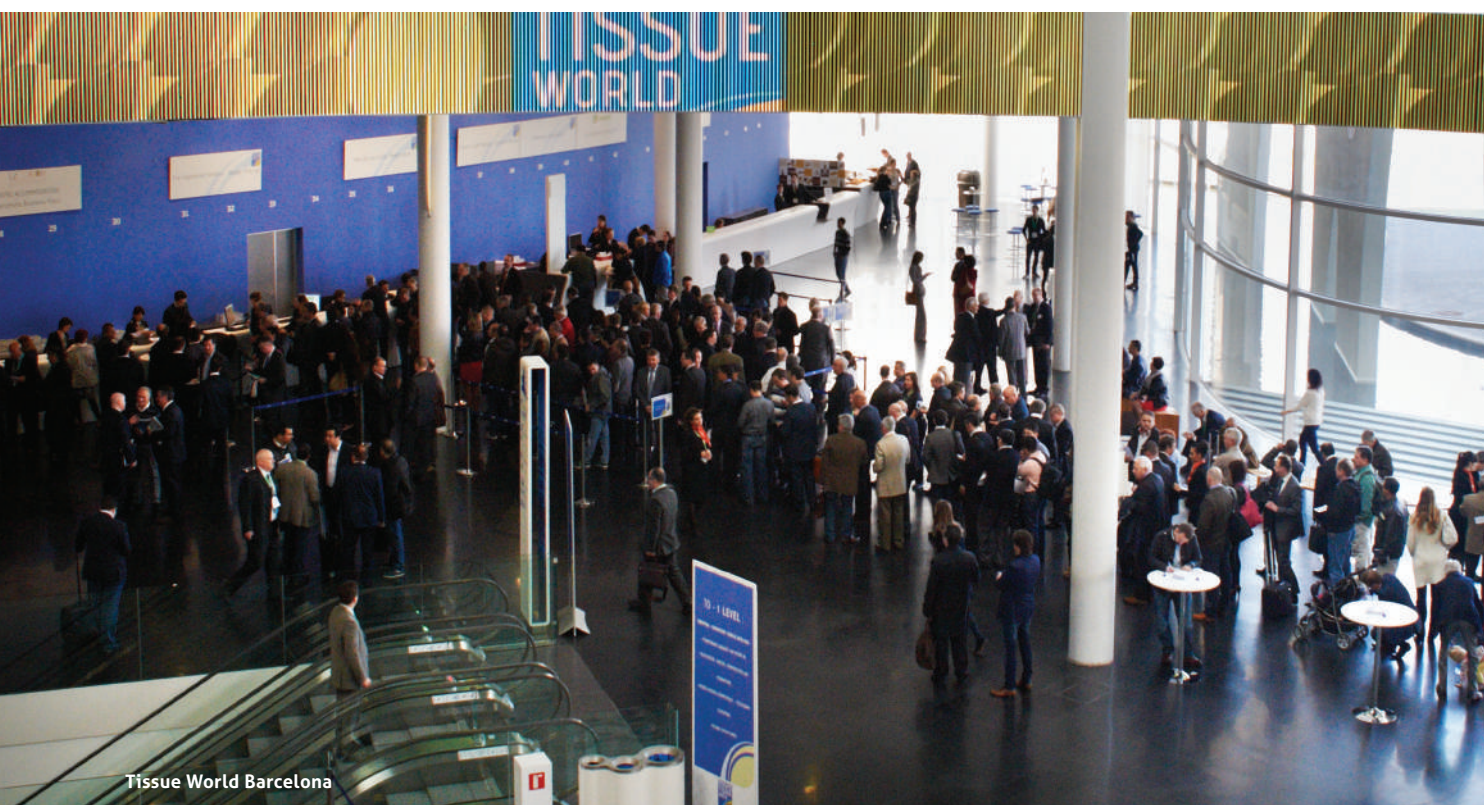
Main Global Exporters of Tissue Parent Rolls 2014



Main Global Importers of Tissue Parent Rolls 2014



Event	Date	Location	Website
Miac	October 14 - 16, 2015	Lucca, Italy	www.miac.info
ISSA/INTERCLEAN Las Vegas	October 20 - 23, 2015	Las Vegas, USA	www.issainterclean.com/
Tissue World Jakarta Conference	October 28 - 29, 2015	Jakarta, Indonesia	www.tissueworld.com /Jakarta
Tissue World New Orleans	March 14 - 17, 2016	New Orleans, USA	www.tissueworld.com/NewOrleans
CIDPEX 2016	April 11 - 13, 2016	Nanjing, China	www.cnhpia.org/en/conference.htm
ISSA/INTERCLEAN Amsterdam	May 10 - 13, 2016	Amsterdam, Netherlands	www.issainterclean.com/
Asian Paper 2016 Bangkok	May 25 - 27, 2016	Bangkok, Thailand	www.asianpapershow.com/
Tissue World Istanbul	September 27-29, 2016	Istanbul, Turkey	www.tissueworld.com/Istanbul
Tissue World Milan	March 28 - 30, 2017	Milan, Italy	www.tissueworld.com/Milan
Tissue World São Paulo	June 7 - 9, 2017	São Paulo, Brazil	www.tissueworld.com/SaoPaulo



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What is your company's primary field of business (tick all that apply):

A. INTEGRATED TISSUE PRODUCTS MAKER

Primary business making paper and producing:

- ☐ Consumer (At Home) Finished products
☐ Away-from-Home (AFH) Finished products
☐ Other Tissue Grades, please specify:

B. JUMBO ROLL SUPPLIER

- ☐ Jumbo Roll Maker, for sale to converters

E. SUPPLIER TO THE TISSUE INDUSTRY Please check all that apply:

- ☐ Paper making machinery
☐ Fabrics, felts, clothing
☐ Drying technologies
☐ Process automation and control
☐ Water treatment, environmental and effluent control
☐ Dust control and air treatment systems
☐ Doctors and creping blades
- ☐ Deinking
☐ Stock preparation, fiber processing and pulping equipment
☐ Fibers: Market pulp and recycled fiber
☐ Chemicals and chemical technologies
- ☐ Converting machinery and supplies
☐ Printing machinery and supplies
☐ Inks, glues and dyes
☐ Embossing rolls

C. TISSUE CONVERTER

Primary business is converting jumbos and producing:

- ☐ Consumer Finished products
☐ Away from Home (AFH) Finished products
☐ Other Tissue Grades, please specify:

D. RETAILING AND DISTRIBUTION

- ☐ Retailer
☐ Broker
☐ Distributor
- ☐ Knives and blades
☐ Folders/interfolders
☐ Cores and coreboard
☐ Wrapping/Packaging equipment and supplies
☐ Transport and logistics
- ☐ Energy and Power
- ☐ Testing machines
☐ Engineering
☐ Consulting services. Please specify field:
☐ Dispensers and dispenser systems
☐ Insurance and financial services
☐ Used machinery
☐ Media, press, information services
- ☐ Other (please specify):

Signature

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