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TWM

TISSUE WORLD MAGAZINE

THE US NORTHEAST

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NEW YORK

How to be first in the world's most advanced market

Soundview Paper and SCA South Glens Falls
talk changing trends and demographics

PLUS

MarketIssues: Targeting top brand icons ...
by comparison and confusion

Pulp Technical Theme:
Södra and Canfor discuss latest innovations

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Market strategy at Europe's third largest tissue manufacturer WEPA Group

ExitIssues:
Headwinds in the Russian tissue market

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Soundview Paper talks to TWM about the opportunity on its doorstep

Kit Vale, global director, category solutions, Daymon, talks Millennial consumers in our Retail Special



TWM

TISSUE WORLD MAGAZINE

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The US faces big structural changes to its tissue market

TWM, and hopefully all who read our Regional Report in this edition will join us, has enjoyed the privilege of touring the world's leading tissue market North America – ranked third in terms of global T&T with 22% of overall capacity.

New York and the Northeast US have another level of energy above and beyond most of the regions TWM has had the privilege to be invited to tour. That appetite for the best that modern living has to offer has embraced the best that tissue has to offer for decades.

It's the world's most advanced, most fought over, and most mature market. Huge amounts of money and brainpower go into chiselling out narrow percentage advantages through ingenious, and also sometimes copycat and dubious – as our MarketIssues report makes clear – advantages. So is that market getting tired, a very un-American thing? TWM's reports reveal a flat but steady demand, albeit one that struggles with costs, and only 'modest interest' in modernising tissue machinery.

At the same time, Chinese-owned St Croix Tissue, in Baileyville, Washington County Maine, is investing heavily and increasing capacity and efficiency with new manufacturing technology. Upgrading, across many of the older manufacturing and service sectors of the country, is something which the homeland is not doing well. It is struggling, like every pre-eminently successful nation eventually has to, to respond to the shifting tectonic plates of world economics.

Of its ageing transport systems the American Society of Civil Engineers' last report in 2013 (another is due next year) ranked performance in the various sectors: aviation D; bridges C+; inland waterways D-; ports C; rail C+; roads D; mass transit D. The infrastructure renewal deficit, it suggested, will be \$3.6 trillion by 2020.

The nation's various 'rust belts' attest to the decline in old industries. So what of tissue manufacturing?

TWM's US Northeast edition reveals a flat value and volume growth rate since 2007; only a 'modest interest' in modernising machinery; a dated asset base with a high number of machines installed in the 1950 to 1980s; and almost as many machines installed pre-1950.

Of 13 TAD machines operating in the Northeast, eight are very early vintage installed on machines dating back to the 1950s, 60s and 70s.

Competition is fierce to gain the slightest gain in market share – in marketing, social media, retail, bulk buying, online shopping, discounting, loss leading, cunning not to say deceptive advertising.

The latest, quickest, most efficient and cost effective machinery will swing the game, hence the predictions of more and more insiders that significant structural changes to tissue in the US lie ahead. No successful industry can stand still.

F

Helen Morris



Editor,

Tissue World magazine

Tissue World New Orleans concludes successfully; attracts attendees from 56 countries

Tissue World offers a big "Thank you" to the 1,588 attendees from 56 different countries who helped to make the New Orleans exhibition and conference such a success.

The full exhibition hall featured 155 leading vendors from across the tissue value chain, and the four-day conference successfully dissected important tissue industry topics ... including sustainability issues, strategic market insights, Yankee operations and technological innovation.

For those of you who unaccountably could not make it, and for those who would like to relive the whole event, a report on key issues begins on page 8.

We return to Miami in 2018. We look forward to seeing you there.

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Targeting top brand icons ... by comparison and confusion

Copy-cat labelling on private label products has created a lucrative revenue stream for discount stores, increasing confusion for consumers, and upped the champagne consumption of litigation lawyers. Industry analyst Greg Grishchenko reports.

Over 40 years have passed since the Federal Trade Commission of the United States, the primary federal agency responsible for regulating public advertising, openly supported comparative advertising – the naming of competitors in an ad message – as being beneficial for consumers.

Comparative advertising is also a subject of regulation by a number of federal, state, local laws and self-regulatory codes of conduct. Among them are the Federal Trade Commission Act and the section 43(a) of the Lanham Act, ratified in 1946 as the primary federal trademark statute of law in the United States.

The Lanham Act prohibits a number of activities, including trademark infringement, trademark dilution, and false advertising. However, 16 years into the 21st century, there is still no

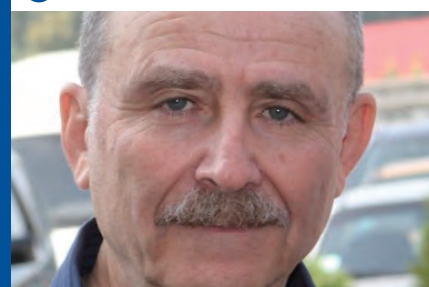
standard code of conduct for such advertisement in regards to policies and definitions. Confusion still goes on, creating frustration among leading brand owners – and obvious excitement for litigation lawyers.

In the highly competitive United States tissue market leading consumer product manufacturers like Georgia-Pacific (GP), Procter & Gamble and Kimberly-Clark are always targeted by other market players promoting their own products, especially private label suppliers who sometimes prefer not to reveal their manufacturing source.

In April 2015, GP filed a federal lawsuit against Aldi, the discount grocery chain with 1,400 stores in the United States, Solaris Paper, a US-based tissue paper converter, and an additional tissue product manufacturer. The complaint said the packaging of GP's



Greg Grishchenko



Industry analyst

top brand Angel Soft toilet paper had been deliberately copied in details by Aldi for its Willow Soft Touch bath tissue. While court experts may have disputed any resemblance of baby pictures on labels or fonts of the word Soft, the offending phrase "Now with 15% more sheets than Angel Soft" was an issue involved in the eventual outcome.



"In the highly competitive United States tissue market leading consumer product manufacturers like Georgia-Pacific, Procter & Gamble and Kimberly-Clark are always targeted by other market players promoting their own products, especially private label suppliers who sometimes prefer not to reveal their manufacturing source."

It took four months for Aldi to agree for out-of-court settlement with GP. While specific terms of the settlement are unknown, judiciously-worded statements from defendant parties indicate that Aldi will change the packaging design of Willow Soft Touch to avoid resemblance with Angel Soft.



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Changing dynamics in markets to the east and west offer opportunities and challenges for the region's tissue sector. The Tissue World Istanbul conference will embrace these important factors and provide a complete insight. In addition, the latest technical and energy innovations being used to respond to fast changing local and regional tissue demands will also be examined in the conference.



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By industry analyst Greg Grishchenko



Examples of products with the 'Compare to ...' tag

At the present time, six months after the GP-Aldi settlement, private label markings for tissue products have not changed much in its comparative ad wording. Aldi, the defendant in the lawsuit, did revise Willow Soft Touch labels. A red box with "15% more" words has gone along with a baby and a cloud, but the words "Compare with Angel Soft" remain intact as well as a disclaimer statement about the true Angel Soft brand owner.

A notorious "Compare with" phrase even broadened to the other Aldi products including kitchen towels and napkins. Aldi's private labels Willow and Boulder picked the other GP products such as Sparkle, Mardi Gra and Vanity Fair, Procter & Gamble's Bounty and Charmin, and Kimberly-Clark's Scott.

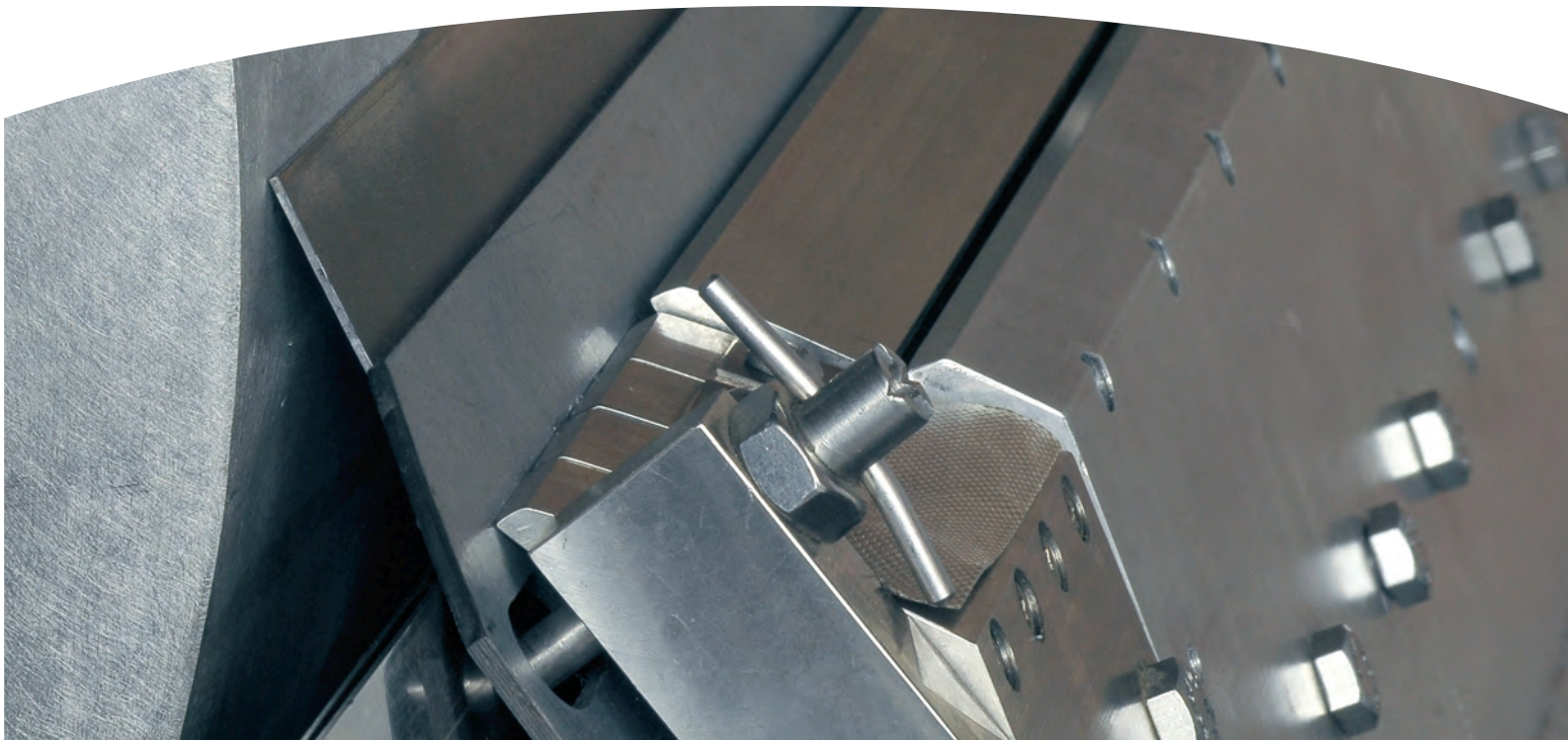
Aldi is not alone in tackling market icons. Many discount retail chains, drugstore

chains, grocery supermarket chains and home improvement companies use "Compare with" wording on their private label tissue goods. Ad graphics may vary from quite visible coloured buttons to almost unnoticeable small font sentences combining the word "Compare" with a disclaimer.

Indeed a "Compare with" allegation seems to be a harmless thing asking a customer to go further in their shopping habits. The whole story is a gold mine for litigation lawyers and a nuisance for market leading brand manufacturers who spend hundreds of millions of dollars buying expensive tissue making machinery to guarantee their quality declarations.

"It took four months for Aldi to agree for out-of-court settlement with GP. While specific terms of the settlement are unknown, judiciously-worded statements from defendant parties indicate that Aldi will change the packaging design of Willow Soft Touch to avoid resemblance with Angel Soft."

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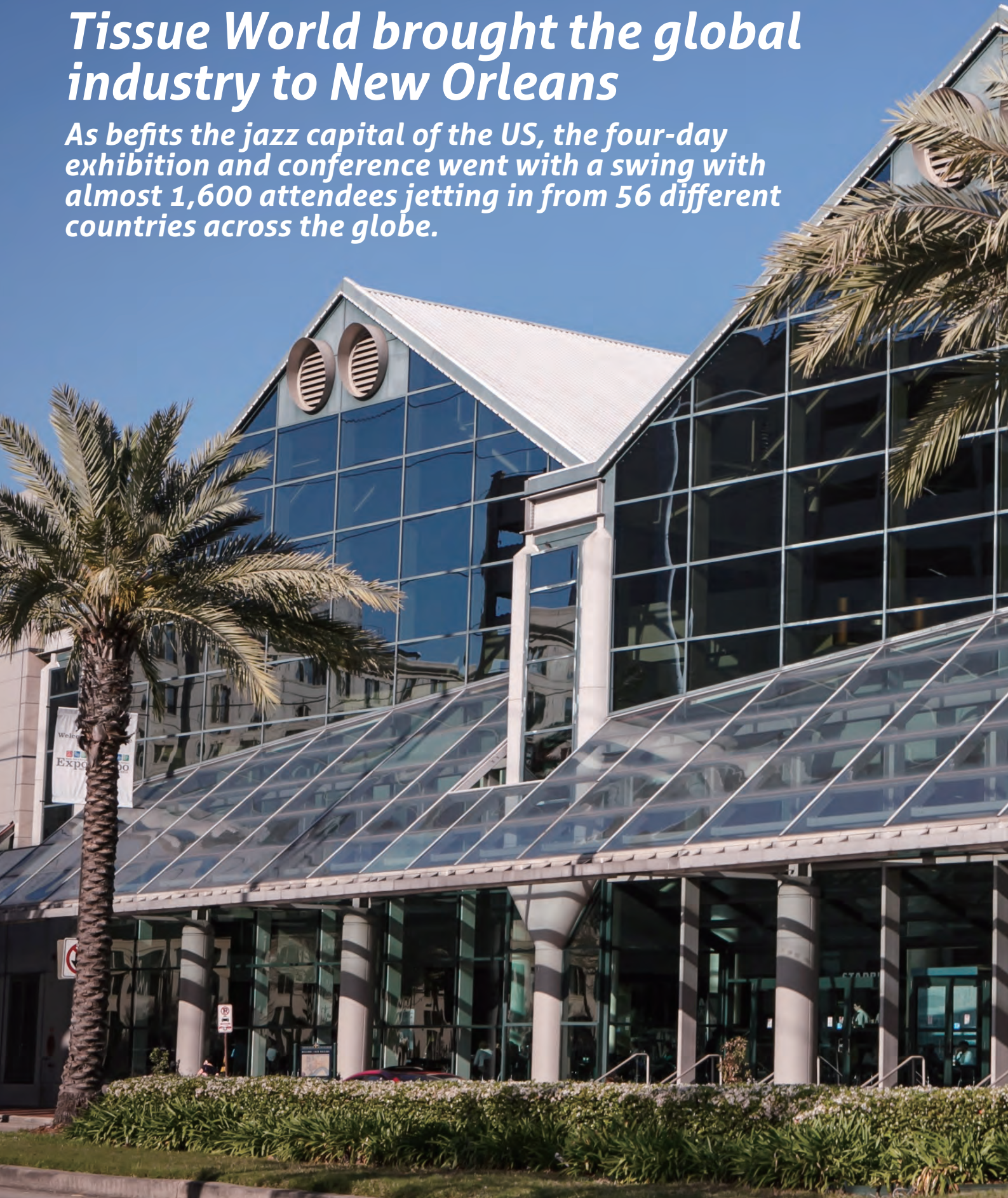
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Tissue World brought the global industry to New Orleans

As befits the jazz capital of the US, the four-day exhibition and conference went with a swing with almost 1,600 attendees jetting in from 56 different countries across the globe.







Keynote speaker Don Lewis, president, SCA AfH Professional Hygiene, helps to kick off the conference in New Orleans

The four-day Tissue World exhibition and conference, on its first visit to New Orleans, was the largest gathering of tissue professionals and senior business contacts from across the industry at America's largest tissue industry event.

The full exhibition hall featured 155 leading vendors from across the tissue value chain. Seven of the exhibitors showcased machinery on the exhibition floor itself offering the best kind of hands-on experience.

The March conference successfully dissected important tissue industry topics ... from sustainability issues, strategic market insights, Yankee operations and technological innovation.

Tissue World offers a big "Thank you" to all the participants, speakers and exhibitors.

SCA, G-P, Jaeger, Toscotec and Andritz kick-started America's largest tissue industry conference

The "Beyond Sustainability: Leading a Culture of Innovation and Responsible Production" theme enabled key speakers to offer their insight into the region's tissue sustainability trends. Themes and talks included:

- "Improving Yankee Efficiency and Runnability" with talks from John Holton, Jaeger; Ron Clarke, Toscotec; Larry Bonday, Nalco; Erwin Walcher, Andritz, and Giordano

Fragiacomo, Valmet;

- Opening remarks by conference chairman Bruce Janda, co-founder and principal, InnovaSpec;
- "New Directions at Which Companies are Looking at Sustainability Across their Operations" by Don Lewis, president, SCA AfH Professional Hygiene, Europe & North America, USA;
- "Public Policy Trends Affecting the Tissue Industry" by Donna Harman, president and chief executive, American Forest & Paper Association (AF&PA), USA;
- "Leading from Within – Keeping the Know-How of a Retiring Generation" by Bill Sleeper, former president, Georgia-Pacific Professional NA, USA;
- "New North American Dynamics" by Esko Uutela, Principal – Tissue, RISI, Germany;
- "Technological Innovation and Energy Efficiency in Tissue Production" with talks from Alfredo Sarli, Voith Paper Air Systems;
- Luca Linari, Milltech Division, Toscotec;
- Joan Vila, L.C. Paper, Spain;
- Paul Bicho, Canfor Pulp Innovation, Canada;
- Bill Moore, Moore & Associates, USA;
- Stefano Pecchia, Novimpianti Drying Technology;
- Pete Augustine, Fabio Perini North America, USA;

- and Jill Thiede, Paper Converting Machine Company, USA.

Day four: the "Technological Innovation and Energy Efficiency in Tissue Production" theme continued and included talks from: Clive Butler, A. Celli Paper; Clayton Campbell, Kemira, USA; Frank Cunnane, Cristini GC, USA, and Hannes Vomhoff, Innventia, Sweden.

Atlas Paper Holdings and EDT claim sustainability awards

Atlas Paper Holdings and EDT have won sustainability awards at this year's Tissue World New Orleans exhibition.

Atlas Paper Holdings – owned by Resolute Forest Products – won the Most Energy-Aware Mill Award category, the first award of its kind for the tissue industry and launched in partnership with Tissue World magazine.

Energy accounts for 23% of Resolute Forest Products' paper production costs and its focus on improving energy efficiency and replacing high-emission fuels like coal with less carbon-intensive fuels is to benefit both the environment and the company's bottom line.

It has invested in clean energy projects, which reduce greenhouse gas emissions as well as power costs.

Its Hialeah, Miami-based tissue facility – acquired as part of Atlas Paper Holdings in November 2015 – is a Green Seal-certified operation and has been producing 100% recycled fibre products using a chlorine-free process since it was established in 1976.

The facility is currently transitioning from using recycled paper as an input to recycled bleached kraft (RBK) pulp produced at Resolute's Fairmont (West Virginia) pulp mill, which is FSC chain-of-custody certified.

A 2016 internal analysis by Resolute evaluated environmental performance improvements. The preliminary results are: An increased yield from fibre inputs – from an average of 67% to 94%; decreased downtime caused by wash felts and wires due to stickies from an average of three hours a month to zero; reduced energy use by approximately 20% as a result of bypassing onsite de-inking process; reduced residual waste by 67.5% from an average of four trucks

per day to 1.3 trucks per day; reduced chemical defoamer usage by over 30%.

In 2016, Resolute plans to integrate the Hialeah facility and the other Atlas Paper operations into Resolute's corporate energy efficiency and GHG reduction initiatives, which it said will likely lead to further successes and demonstrate the company's dedication to energy awareness and continuous improvement.

Tissue World New Orleans' second winner is Enzymatic Deinking Technologies (EDT) which claimed the trade show's prestigious "Most Sustainable Exhibitor" award.

The company has repeatedly made a series of sustainability efforts to ensure its booth is as environmentally friendly as possible.

Judges said its efforts for this year's show were "modular and re-usable – EDT uses its booth construction materials for every Tissue World".

The company also combines shipment of its booth with a large shipment to reduce its carbon footprint; it purchases local products for its construction; it combines its North American sales meeting with Tissue World to save on 15 airline tickets; it appointed an operations manager to look after Health and Safety and he coordinates the build-up and dismantling, and all the company's staff are involved in this process; it always uses suppliers that adhere to high-level ethical standards.



The conference dissected topics including sustainability, strategic market insights, Yankee operations and technological innovation

EDT sells natural, fermented enzymatic products that are not petroleum-based to highlight the message of value performance and improving the environment. Reducing energy use and the carbon footprint of papermaking is central to its value delivery.

Judges said: "Products typically reduce paper drying energy consumption by 5-10% and those products also have a recycled fibre impact allowing mills to re-use fibres more often which reduces landfill.

"Finally, its technology improves the fibre yield and recycled producers can make tonnes of paper with less impact on trees.

"EDT's booth has a very natural, outdoor look to it with scenic pictures and plants

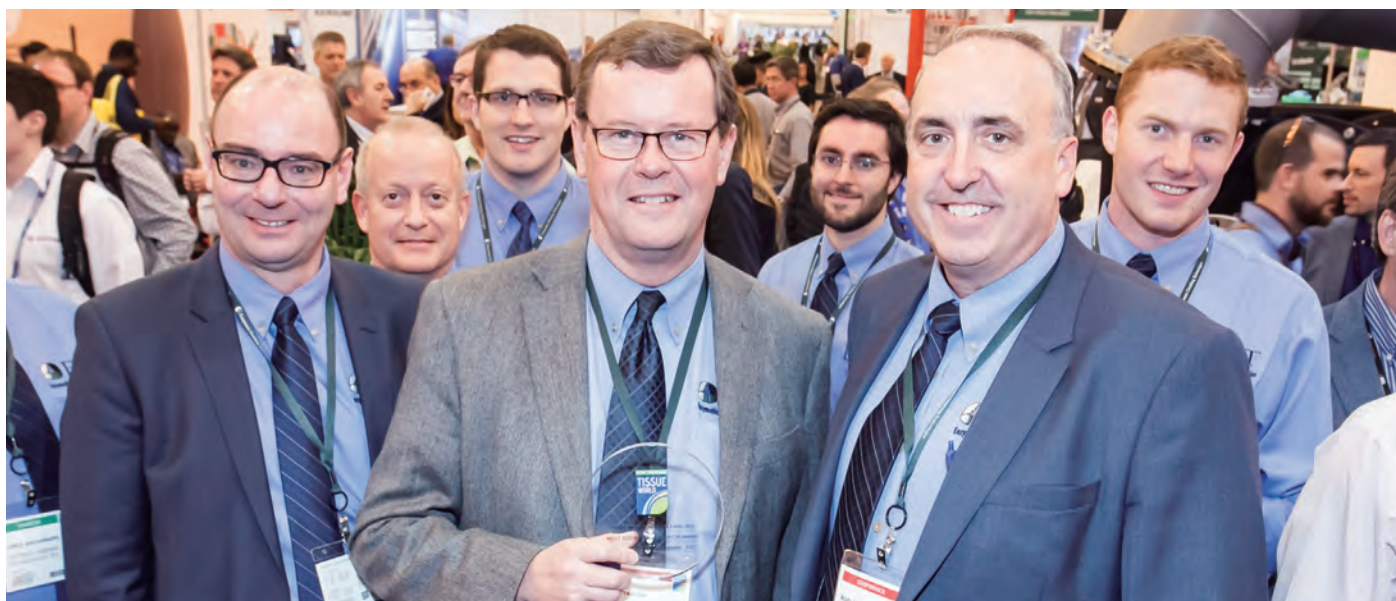
to help communicate the message of being a non-oil-based technology."

Tissue World Americas 2018 moves to Miami

Tissue World has announced that its next Americas exhibition will be held in the beautiful city of Miami, Florida.

Following survey results, the next TW Americas will be held from 21 – 23 March 2018 at the Miami Beach Convention Center, which is currently undergoing a \$500m state-of-the-art renovation.

In line with the new venue, the tissue industry professionals that attend will also experience a new look and feel of Tissue World in North America.



Enzymatic Deinking Technologies claimed the prestigious "Most Sustainable Exhibitor" award for repeated efforts to ensure its booth is as environmentally-friendly as possible

A misty forest landscape with a large white cross symbol in the center. The cross is a simple, bold, white symbol that stands out against the dark, misty background of the forest. The forest is composed of many tall, thin trees, likely evergreens, and the mist is thick and white, creating a sense of depth and atmosphere. The sky is a pale, hazy blue.

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 **SÖDRA**

CHINA

SCA's divestment of business for integration with Vinda closes

SCA has said the divestment of its business in South East Asia, Taiwan and South Korea for integration with Vinda closed on 1 April.

The tissue giant is the majority shareholder in Vinda, one of China's largest hygiene companies.

As part of the transaction, SCA and Vinda have signed an agreement regarding the exclusive license to market and sell the SCA brands; TENA (incontinence products), Tork (AfH tissue), Tempo (consumer tissue), Libero (baby diapers), and Libresse (feminine care) in South East Asia, Taiwan and South Korea.

With this agreement, Vinda will hold the rights to these product brands in these Asian markets.

Vinda will acquire the brands Drypers, Dr.P, Sealer, Prokids, EQ Dry and Control Plus in these markets.

SCA will continue to provide innovation and technical support for the business.

SCA has been a shareholder in Vinda since 2007, became its majority shareholder in late 2013, and has consolidated Vinda financials since the first quarter of 2014.

In 2014, SCA divested its hygiene business in China (Mainland China, Hong Kong and Macau) for integration with Vinda.

SCA's hygiene business in South East Asia, Taiwan and South Korea had net sales of approximately SEK

2.2bn in 2014.

The business has approximately 1,600 employees and three personal care production sites in Malaysia and Taiwan. The purchase consideration amounts to HKD 2.8 billion on a debt-free basis.

Vinda boosts capacity with three TMs

Chinese giant Vinda Group has invested in three Toscotec-supplied tissue machines that are scheduled for start-up in the second half of 2016.

Two Ahead 2.0M machines will be installed at the company's Sanjiang facility in Guangdong province where Vinda already has eight Toscotec-supplied tissue machines running, totalling a capacity of 250,000tpy.

The third machine will be installed

the mill: highest performances with the lowest operating costs, by tapping on cost-effective energy sources such as steam and benefiting from Toscotec's second generation Steel Yankee Dryer".

Lee & Man boosting tissue presence in China; year-end profits increase 22.4% from 2014

Lee & Man is aggressively expanding in the tissue sector in China.

It looks set to add around 220,000tpy of tissue capacity by the end of this year at its Chongqing mill, which currently runs four tissue PMs with a combined capacity of around 150,000tpy.

The plant also operates a 165,000tpy bamboo pulp line and several recycled containerboard PMs with a combined

"SCA and Vinda have signed an agreement regarding the exclusive license to market and sell the SCA brands; TENA (incontinence products), Tork (AfH tissue), Tempo (consumer tissue), Libero (baby diapers), and Libresse (feminine care) in South East Asia, Taiwan and South Korea."

in Vinda Shandong where Toscotec has already supplied three lines in three years.

This Ahead 1.5M is identical to the machine fired up last August in Laiwu mill, with a design speed of 1,700m/min and a production capacity of 30,000tpy. The TM supplier said the TT DOES (Drying Optimization for Energy Saving) "delivers the greatest advantages for

capacity of around 1.1 million tpy.

Valmet has been chosen to provide two 60,000tpy tissue machines.

Each will be 5.6m wide and have a design speed of 2,000m/min.

Lee & Man has not announced the suppliers of the other new tissue PMs that are in the works.



Vinda boost: Two Ahead 2.0M machines will be installed at the Sanjiang facility and the third in Vinda Shandong

Maximize[®] enzymatic technology from Buckman.

Conventional tissue fiber refining takes a lot of energy. And that takes money, time and a toll on both the fiber and the environment. But mills that have switched to Maximize enzymatic technology are refining and drying with less energy and less cost. They're able to increase strength and softness, use less expensive fiber, speed up production, and reduce their impact on the environment. Your mill can too.

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World News

Positive results: In the year ending December 2015, Lee & Man's profits climbed to HK\$2.3 billion, up 22.4% from 2014. Its revenue also increased, to HK\$17.6 billion from the previous year's HK\$17.1 billion.

The Hong Kong-listed firm ascribed the improvement to the massive capacity shutdown campaign in Dongguan city, Guangdong province last year, as well as to low raw material costs and the valued-added tax (VAT) refund.

In 2015, Dongguan city shut down 54 small paper and board mills, most of which were recycled board concerns.

And China's Ministry of Finance started offering a rebate of 50% on the VAT paid by pulp and paper producers on recovered paper based products as of 1 July.

News from RISI (www.risiinfo.com)

Shanghai Welfare invests in new 12,000tpy tissue PM

Shanghai Welfare Group has ordered a new 12,000tpy tissue PM for its mill in Shaoxing city, Zhejiang province.

Kawanoe Zoki has been signed up to supply the new machine, which will be 2.76m wide and have a design speed of 850m/min. Its start-up is scheduled for October.

Following that, the producer is planning to erect an identical PM in 2017.

Shanghai Welfare currently operates several tissue PMs with a combined capacity of around 65,000tpy at the Shaoxing plant.

News from RISI (www.risiinfo.com)

HUNGARY

Sofidel strengthens presence in Hungary

Sofidel has continued to grow in Europe after it announced the acquisition of the Forest brand and converting facilities in Hungary.

The operation, made with Forest Papir Kft, involves the acquisition of new customers and the Forest brand, an overall converting production capacity of 30,000 tonnes and a converting plant in Piszke.

The framework of the agreement also includes buying approximately 90,000 square metres of land.

Sofidel has acquired:

- finished product sales (brand segment and private label segment);
- the Forest brand, one of the main brands on the Hungarian market;
- the Piszke plant (with a Futura line for toilet paper rolls) north-west of Budapest near the Slovakian border;
- the line in the Lábatlan plant (one, Perini, for toilet paper and kitchen rolls) and the lines in the Leányvár plant (several lines, for folded product: handkerchiefs and paper napkins), and the rent of the relative plants for 3 years;
- approximately 90,000 square metres of land next to the Piszke production site.

The acquired overall converting production capacity is equal to 30,000 tonnes and 200 workers are involved.

Luigi Lazzareschi, Sofidel Group chief executive, said: "With this acquisition in Hungary, through our production activity, we are staking an area of eastern Europe that was hitherto left uncovered by us."



Infinity Italy's Bologna-headquarters will be dedicated to the R&D of packaging machines.

ITALY

Infinity boosts presence with Italian subsidiary

Infinity Machine & Engineering has responded to global market growth in the tissue industry with the opening of a subsidiary in Bologna.

The Italian headquarters will be dedicated to the research and development of packaging machines, such as the company's single-roll wrapping machine SOLO 250 and the Eclipse ET4 multi-pack poly wrapper.

Infinity was established 13 years ago with its global headquarters based in Green Bay, WI, USA.

It manufactures machinery and provides engineering services for the conveying and packaging of tissue paper rolls and folded towels, selling a full range of packaging machines and engineering service to the global tissue market.

Its Italian headquarters will work in conjunction with its US engineering colleagues to develop and manufacture high-end tissue wrappers and poly bundlers.

Catello Di Carlo, European sales manager of Infinity Italy, said: "A high level of customisation, the robustness of our machines, and the advanced technology we are able to offer guarantee added-value and efficient production to all of our customers."

The Italian subsidiary also announced its decision to work with Siemens, a supplier of advanced motion control and automation systems.

Davide Sabini, Infinity's R&D electrical designer, said: "The tissue market is technologically advanced and demanding. In addition to the motion control platform we use in North America, we needed to develop a second platform that could offer excellent technological systems and a broad worldwide presence for those customers insisting on a world class alternative."

"We chose Siemens as a technological partner for many reasons including its engineering expertise, advanced technology, and the global recognition of its products and solutions."

Infinity Italy has worked closely with Siemens Packaging

Competence Centre, also headquartered in Bologna.

Di Carlo added: "High performance, flexibility and reliability, combined with a high production speed, enable Infinity machines to rank among the very best machines in this sector."

"We have chosen to adopt the motion control platform of Siemens Simotion D – flexible and secure – for the development of our machines because it represents the perfect combination of scalability and performance for motion control applications. "That, combined with Siemens Sinamics S120 drives, has allowed us to make the machines even more compact and efficient."

Lucart starts-up PM4 in Porcari after rebuild

Lucart has successfully started-up its PM4 tissue machine in Porcari, Lucca, after a rebuild undertaken by Toscotec.

The upgrade includes a modification of the forming section and the complete replacement of the old hood with a new Toscotec MONO Yankee Hood (TT Milltech -MYH) fed by natural gas and complete with relevant Air System and Heat Recovery System.

The upgrade of the wire section consists of the replacement of the forming roll and of the main white water saveall, as well as relocation of the headbox and breast roll.

PM4 is a Twin wire former with double press configuration for 2.7 m sheet width, dedicated for the white and coloured tissue paper jumbo reels.

The aim of the investment is to increase the production capacity up to 90tpd and the operating speed of 20% improving the formation quality and reducing the energetic consumptions.

Lucart Group produces MG paper for flexible packaging and is one of the top 10 European manufacturers of paper and tissue products and one of Europe's leading producers of Airlaid products. The company has more than 60 years of experience. The production capacity of Lucart Group is 300,000tpy and it has 10 paper machines and 52 converting lines. Its consolidated turnover is €400m and it has 1,200 staff.



The UNICA machine can reach speeds of up to 220 packs per minute and Stax is working on reaching 250 packs per minute.

GLOBAL

Stax Technologies responds to demand with UNICA launch

Stax Technologies has launched packaging machine UNICA, a single roll wrapper that wraps single bath rolls in both paper and poly.

The machine can reach speeds of up to 200+ packs per minute and "offers long term reliability together with a high-end product", according to the supplier.

Stevan Kalos, sales and marketing director at Stax, said: "While searching for the best solution for our customers, we have developed a machine that is capable of wrapping single bath rolls in both paper and poly while maintaining a high speed and outstanding quality of product.

"The machine can currently reach speeds of up to 220 packs

per minute. However, we are working on the possibility of 250 packs per minute."

He added that the machine exceeds expectations through superior quality, speed, ease of use and simplicity of the packaging process.

"By using the top-class motion controller OMRON – NJ501 together with implementing a new approach of creating user interface, UNICA is one the easiest machines for operators."

With the launch, Stax is targeting the HORECA market and also aims to expand its market in the Caribbean region.

The machine was launched at Tissue World New Orleans in March.

AMERICA

Clearwater Paper reports 4Q and full year 2015 results

Clearwater Paper has reported sales of \$431.6m for the fourth quarter of 2015, down 8.6% compared to the same period a year ago.

The company said the decrease was mainly due to the sale of its specialty mills in December 2014.

EBITDA for the fourth quarter of 2015 was \$58.2m.

Linda Massman, president and chief executive, said: "We delivered solid performance in 2015 with \$211m of Adjusted EBITDA.

"These results were achieved by aggressively managing costs and driving operational efficiencies throughout our manufacturing and distribution network, in a year that included planned

major maintenance and no sales from the specialty mills.

"Our 2016 priorities are a continued focus on optimising efficiency in the tissue business and expanding our customer mix for paperboard while leveraging our investments to improve operations, investing in our team and exceeding customer expectations."

In the fourth quarter of 2015, net sales for the company's consumer products division were \$238.3m, 18.3% lower than fourth quarter 2014 segment net sales of \$291.6m.

Total tissue sales volumes of 96,081 tonnes in the fourth quarter of 2015 were down 26.2% and converted product cases shipped were 12,624m, down 7.2% compared to the fourth quarter of 2014.

Average net selling prices increased 10.8% to \$2,479 per tonne in the fourth quarter of 2015 compared to the fourth quarter of 2014 due to improved

product mix resulting from the sale of the specialty mills.

Clearwater Paper manufactures quality consumer tissue, away-from-home tissue, parent roll tissue, bleached paperboard and pulp at manufacturing facilities across America.

The company is a premier supplier of private label tissue to major retailers and wholesale distributors, including grocery, drug, mass merchants and discount stores.

It also produces bleached paperboard used by quality-conscious printers and packaging converters.

UK

Sofidel increases UK tissue presence

Global tissue producer Sofidel is to boost its presence in the UK market

after it invested in a latest-generation tissue rewinder.

Supplied by A.Celli Paper, the machine has a 3,400mm format and will be housed in Sofidel UK's Lancaster plant. Delivery is scheduled for July 2016.

Sofidel Group was founded in 1966 and is a world leader in the tissue paper production market for hygienic and domestic use: toilet paper, napkins, kitchen paper, handkerchiefs and tissues.

From its headquarters in Porcari, Lucca, Sofidel coordinates the activities of 17 companies throughout Europe and the United States.

UK-based Poppies Europe boosts converting production

Tissue producer Poppies Europe has invested in three OMET napkin production lines.

They will join six existing OMET lines installed by the company in the last two years.

Poppies Europe has been operating in the sector of food, beverage and hygiene disposable products since 1996; it started investing in the production of napkins and launched its first production line in 2000.

The company now has over 30 production lines and over 100 staff at its St. Helens production site, North-West England, producing and distributing disposable products for catering including napkins, tablecloths, paper plates, plastic cutlery, toilet rolls.

Poppies Europe has also purchased

two of its competitors, McNulty Wray and recently the AfH division Staple Disposable to further strengthen its position in the market as well as expanding its product offering to become a market leader in the printed napkins sector in the UK.

POLAND

Wepa Professional Piechowice to boost capacity

Wepa Professional Piechowice is to boost its capacity after it signed for a Toscotec-supplied tissue line to be installed at its Poland-based site.

The new AHEAD-2.0S line will strengthen Wepa's recent strategic growth in the European tissue market that has been launched with the start up in 2015 of similar plants, provided by the Italian supplier, in France and in Germany.

The start-up is scheduled for the first quarter of 2017 and the investment will increase the total number of paper machines for Wepa Group to twenty.

The Toscotec turn key delivery for the new TM21 will comprise a stock preparation systems for virgin pulp, an AHEAD-2.0S tissue machine, TM and plant auxiliaries, electrification and control system.

It is equipped with single layer headbox, double press configuration, Steel Yankee Dryer TT SYD-15FT, Toscotec hood and dust and mist removal. Full engineering, erection, erection supervision, training, start-up and commissioning complete the supply.

The tissue machine will have a width of 2.8m and a design speed of 2,200mpm. It will produce high-quality super-soft toilet tissue and will also run with waste paper based raw material.

The greenfield project will be focused on energy savings and low emission concepts with a great attention to the environmental issues as well as to the impact on the site.

The start-up is scheduled for the first quarter of 2017 and the investment will increase the total number of paper machines for Wepa Group to twenty.

Sofidel to boost capacity in Poland with NTT install

Italian tissue giant Sofidel has boosted its presence in Europe after signing for the latest-generation Advantage tissue machine from Valmet.

The machine will be installed in the Delitissue plant in Ciechanów, Poland, allowing Sofidel to further improve the quality of its product range and increase plant energy efficiency.

The Advantage New Tissue Technology (NTT) 200 machine supplied by Valmet manufactures conventional and textured tissue.

It is 5.5m wide and has a speed of 2,000m per minute and will come into operation in Q4 2017 with a production capacity of 70,000tpy.

Luigi Lazzareschi, chief executive of the Sofidel Group said: "This decision is in keeping with Sofidel's focus on the most innovative and high-performance technology, and is also a significant way of increasing our sustainability standards and expanding our range of products, especially in terms of consumer demand in the premium segment."

Valmet's supply includes the machines for the mixtures preparation as well as the entire automation system.

Sofidel said the NTT technology "allows the production of tissue with minor energy and fibre consumptions in an extremely flexible way, and it is consistent with Sofidel's sustainability strategy for environmental footprint reduction".

The Sofidel Group is a global leading manufacturer of paper for hygienic and domestic use known for its Regina brand.



Wepa: Start-up is scheduled for the first quarter of 2017 and the investment will increase the total number of paper machines for Wepa Group to twenty.

CHILE

Eliodoro Matte leaves CMPC; company hires Luis Felipe Gazitúa as new president

Chilean pulp and paper producer CMPC's president Eliodoro Matte has decided to leave the company

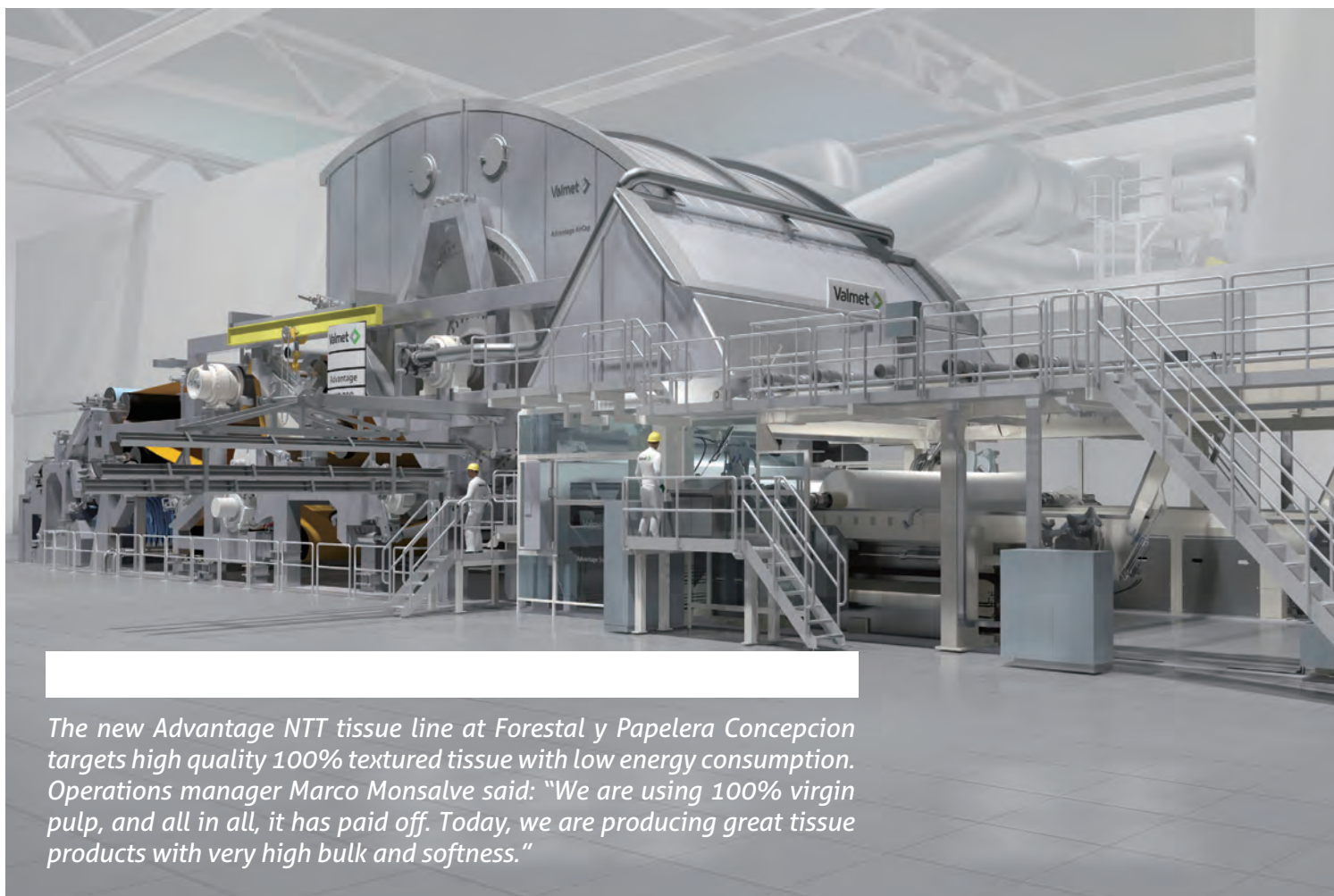
for personal reasons and will be substituted by Luis Felipe Gazitúa.

Matte has been heading the company since 2002 and will step down in April. According to CMPC, Gazitúa has worked in several sectors, including power and energy, telecommunications, the fishing industry, agriculture and forestry.

He has also been a board member in several important Chilean companies,

such as Colbún, Entel, Almendral, Bice Vida, Corpesca, Tattersall, CDF and Cruzados.

CMPC's new president is an engineer graduated by Universidad de Chile and is currently Almendral's president, an investment company which owns 54.76% of Entel, and on which Grupo Matte – also CMPC's controller – is the main shareholder. He is also vice-



The new Advantage NTT tissue line at Forestal y Papeleira Concepcion targets high quality 100% textured tissue with low energy consumption. Operations manager Marco Monsalve said: "We are using 100% virgin pulp, and all in all, it has paid off. Today, we are producing great tissue products with very high bulk and softness."

CHILE

Forestal y Papeleira Concepcion starts up new line

Chile's Forestal y Papeleira Concepcion (FPC) has successfully boosted its capacity with the start up of a new Advantage NTT tissue line.

The new line fulfils FPC's target of producing 100% textured tissue, differentiating the company's product offering, and to produce high-quality tissue with low energy consumption.

Marco Monsalve, operations manager of FPC, said: "Our strategy is to provide

something different to the market.

"To succeed, we had to look for a new and innovative technology, so the choice fell on the Valmet Advantage NTT concept.

"We are also using 100% virgin pulp, and all in all, it has paid off. Today, we are producing great tissue products with very high bulk and softness."

Scope of delivery included a complete tissue production line, a complete

stock preparation system and an Advantage NTT 200 tissue machine with the latest technology for high-quality consumer tissue.

The 5.5m-wide machine is equipped with an OptiFlo II TIS headbox and a cast iron Yankee cylinder.

It also features the well-proven Advantage tissue technology.

The line has a capacity of 70,000tpy of bath, towel and napkin tissue grades.

president of Colbún, vice-president of Entel and retains directory positions in six other companies.

In the past few months, CMPC has changed several executives and announced a new business structure. Ignacio Goldsack has been hired as the company's new CFO, effective February 2016 and replacing Luis Llanos. According to CMPC, Goldsack studied

business and administration at the Universidad de Los Andes, in Chile, and holds an MBA from the Massachusetts Institute of Technology (MIT). Goldsack has extensive experience in the banking and financial sector, having served as senior executive at Deutsche Bank Chile prior joining CMPC. Llanos headed CMPC's financial department for the past 11 years and since September 2015 is CMPC Paper's chief executive.

The engineer graduated from Universidad de Chile and also has a MIT MBA diploma. Llanos began working at CMPC in 1986 and has occupied several positions inside the organisation, including business development, planning and strategy. The company is also expected to announce a new general secretary soon, as Gonzalo García intends to leave the position he has been occupying since 1990. García is also Chairman of Fundación CMPC. In the past few months, CMPC has been restructuring its business units, as in December 2015 it decided to unify its forestry and pulp business.

It carried out the changes aiming to improve operational efficiency and increase the potential of both areas with an integrated analysis of forestry and industrial resources, therefore reaching a higher alignment level within its strategic goals. With the new organisational arrangement, CMPC now has its operations divided into three business areas: Pulp/Forestry, Papers and Tissue.

News from RISI (www.risiinfo.com)

GERMANY

Fire briefly idles production at WEPA tissue mill in Mainz, Germany

A fire brought production to a brief standstill at WEPA's tissue mill in Mainz in March.

A spokesperson for the group confirmed a report of the local fire department

according to which the brigade was called to the mill at 7:20PM on 6 March. The reason for the alert was a fire in the palletising area of the mill.

"Upon arrival the area was filled with smoke and the sprinkler system had triggered," the fire department said in a statement. It added that the neighbouring hall, which houses the site's paper machine, had to be evacuated, too, as the smoke was spreading there. According to the WEPA spokesperson, tissue production was down for several hours due to the incident but the machine was not damaged by the fire.

After 3.5 hours the blaze was extinguished and the plant was handed back to the mill manager.

The amount of the damage was quoted at approximately Euro 20,000.

News from RISI (www.risiinfo.com)

SWITZERLAND

Kimberly-Clark Europe boosts Swiss converting facilities

Kimberly-Clark Europe has invested in the latest generation Futura JOI Embosser for an existing tissue converting line at its Niederbipp facility in Switzerland.

The new JOI Embosser started up in October 2015 and is being used to produce high quality multi-ply toilet tissue.

It can operate in various modes, including nested, decorated embossing and point-to-point, including random point-to-point, and also features the Futura Steel Marrying Roll which Futura said ensures no re-embossing effect and perfect inner ply definition.

The JOI Embosser includes "patented features such as the Zero Deflexion embossing rolls and supreme flexibility in terms of embossing pattern and configuration changes".

With a width of 5.5 metres, Forestal y Papelera Concepcion's machine is so far the widest Advantage NTT line installed.



FPC is a paper manufacturer founded in 1995 and since 2009 it has mainly been producing recycled fibre-based packaging paper.

Its new tissue production line and converting facilities will deliver jumbo rolls and converted tissue products for the Latin and North American markets.

A fire brought production to a brief standstill at WEPA's tissue mill in Mainz in March. A spokesperson for the group confirmed a report of the local fire department according to which the brigade was called to the mill at 7:20PM on 6 March. The reason for the alert was a fire in the palletising area of the mill.

CZECH REPUBLIC

BOR Biotechnology plans new tissue mill in Czech Republic

The Czech firm BOR Biotechnology is preparing to build a new tissue mill in the town of Kozomín just north of the capital city of Prague.

The new facility will have a capacity of 80tpy. Plans call for construction to begin in autumn 2016, with production to launch in the second half of 2017, a spokesperson said.

Environmental approval for the project has been granted and the construction permit approval process is underway,

The project will cost approximately Euro 20 million and will be financed from private and public sources. The firm plans to target the central European tissue market with the new production

as are final negotiations with local authorities. "Talks are still in progress but are drawing to a positive end," said the spokesperson.

The main equipment supplier for the project has also been selected, but the company said it was unable to divulge the name for the time being.

The project will cost approximately Euro 20 million and will be financed from

private and public sources. The firm plans to target the central European tissue market with the new production.

BOR Biotechnology was established in 2008 and is already active in the biomass segment. The firm has a woodchip-powered power plant in Kozomín which is currently operating in a trial phase.

News from RISI (www.risiinfo.com)



Delivery at ISMA 2000's La Torre de Claramunt mill included a Steel Yankee Dryer TT SYD-3,600mm

SPAIN

ISMA 2000 starts up PM1 after rebuild

ISMA 2000 has successfully started up its PM1 at its mill in La Torre de Claramunt mill, Barcelona, after a major dry-end rebuild delivered by supplier Toscotec.

The delivery included a Steel Yankee Dryer TT SYD-3,600mm provided with Toscotec-patented solutions for head insulation, a Yankee steam and condensate system and a new hood, a TT Milltech-SMYH Hood type, with a high level of heat recovery. Fernando Luz, ISMA general manager, said: "To invest in the TT DOES (Drying Optimisation for Energy Saving) package

has been the right move to continue our project, based on an intensive energy-saving concept, already initiated in the phase of pulp treatment.

"Today we are able to produce 100% recycled hygienic tissue by using complex raw material with high quality fibres and less specific energy consumption input".

Davide Mainardi, sales and customer care director of Toscotec, added: "The rebuild has allowed ISMA 2000 to increase the productivity of the tissue machine by 30%."

Northeast United States – A mix of T&T machine vintages, sizes and technologies

C F

Bill Burns

Senior consultant,
Fisher International

The global Towel and Tissue (T&T) market can be divided into six regions where North America ranks third with 22% of overall capacity. North American capacity can be further broken down into four regions in the United States plus Canada. Among these five T&T producing areas, Northeast US, with 15% of the region's population, also represents 15% of North America's capacity (Figure 1).

Zooming into the Northeast US region, there are 21 T&T operating mills producing over 1.3 million annual tonnes on 44 tissue machines (Figure 2). Benefitting from its proximity to the rest of the US, the state of Pennsylvania ranks highest within the Northeast, commanding more than 50% of the region's capacity (Figure 3). New York state ranks second with 20% share and five states share the remaining 30% with less than 10% each. Northeast US capacity growth trend has been flat since 2007 with modest gains offsetting losses over the period (Figure 4).

Worldwide Regional and North America Market Share Positions

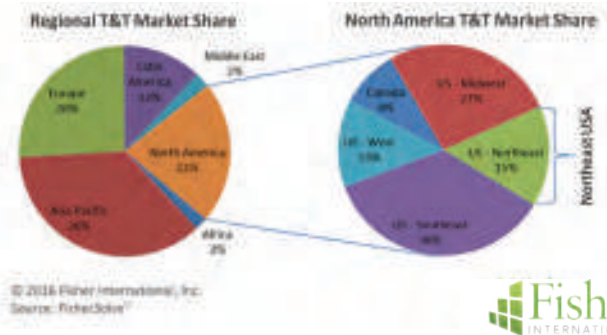
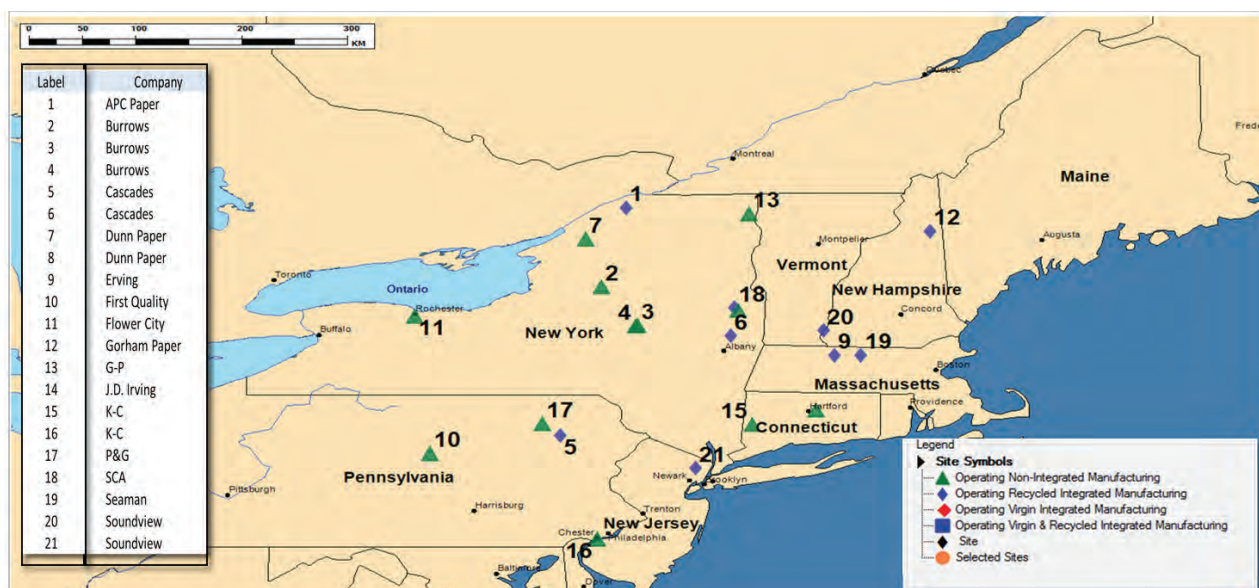


Figure 1 Worldwide regional and North America market share positions

Geographically the Northeastern mills are widely dispersed across seven of the nine states that comprise the region. Only Maine (historically a T&T state) and Rhode Island have no operating T&T mills at this time (Map).

The asset base in the Northeast can be considered dated with a high concentration of machines having been installed in the 1950 to 1980 time frame. What's more, there are almost as many machines operating with pre-1950 installation dates

Northeast USA T&T Mill Locations



as there are with post 2000 dates. The technical ages (a calculated age based on upgrade timing and extent) suggest there has been only modest interest in modernising the machine base (Figure 5). Technology base in the Northeast mirrors the other three US regions with about 30% being "Advanced" versus "Conventional" paper machine configurations. In the case of the Northeast, the Advanced Technology deployed is all Through Air Drying (TAD) (Figure 6). There are 13 TAD machines operating in the Northeast. Of these, eight are very early vintage installed on machines dating back to the 50's, 60's and 70's. The five newer TAD machines all date 2001 or newer.

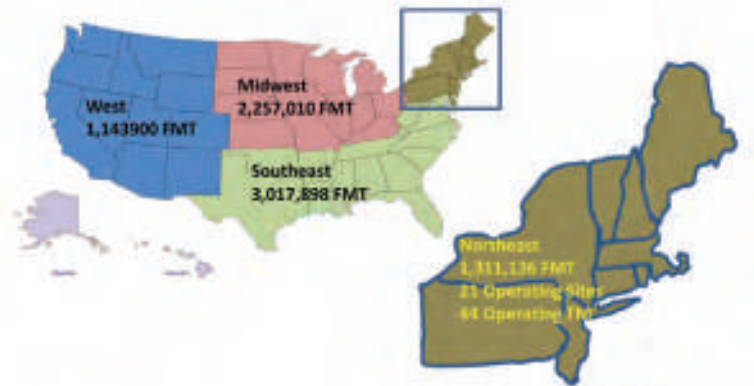
Fibre mix across the four US regions is interesting. The Northeast and South are biased to Kraft pulp but still have considerable recycled fibre in use (Figure 7). Unlike the South and Northeast, the West is very heavy Kraft while the Midwest is heavy recycled fibre.

The asset base in the Northeast can be considered dated with a high concentration of machines having been installed in the 1950 to 1980 time frame. What's more, there are almost as many machines operating with pre-1950 installation dates as there are with post 2000 dates.

Machine profiles indicate relatively narrow widths and modest- to slow operating speeds. Speed ranges are commensurate with the age distribution. Lines range in the less than 600- to above 2100 MPM. About 60% of the lines fall below 1200 MPM which correlates directly with the age distribution (Figure 8). Widths follow a similar pattern with 25% of the lines in the 5-metre range and the remainder all less than 4 metres (Figure 9).

A cost competitiveness assessment of US T&T mills indicates the Northeast has significantly higher cost than the other areas (Figure 10). Interestingly, the high-cost position is not driven by scale or age inefficiencies of lines so much as commodity cost, particularly energy and pulp. Energy disadvantages are influenced in part by higher gas and electrical pricing. On the other hand, pulp pricing tends to be more uniform across geographic regions. The disadvantage in this cost segment for the Northeast appears to be driven by mix rather than pricing (Figure 11) with heavy reliance on northern pulps.

USA T&T Production by Region (FMT/Year)

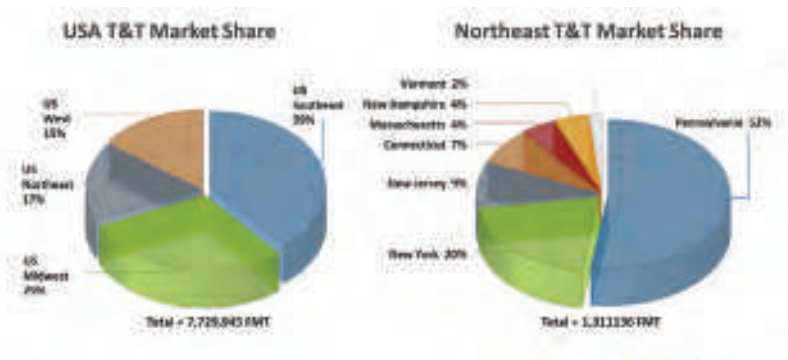


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Figure 2 USA T&T production by region

Northeast USA T&T Market Share

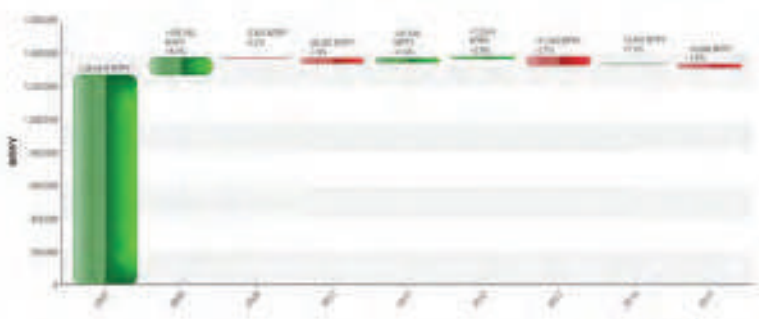


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Figure 3 Northeast USA T&T market share

Northeast USA T&T Capacity Trend

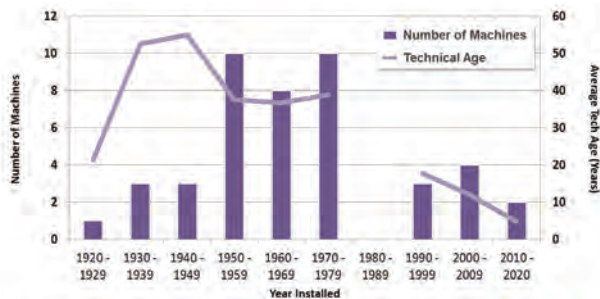


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Figure 4 Northeast USA T&T capacity trend

Northeast USA T&T Machines Age Distribution

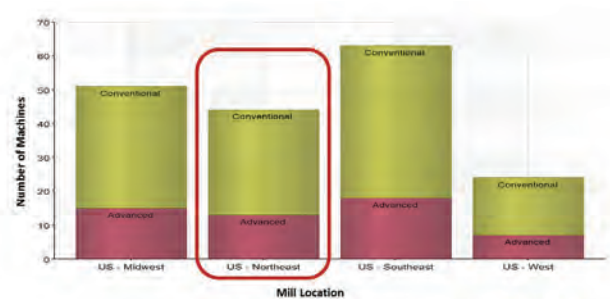


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Figure 5 Northeast USA T&T machines age distribution

Northeast USA T&T Technology Base

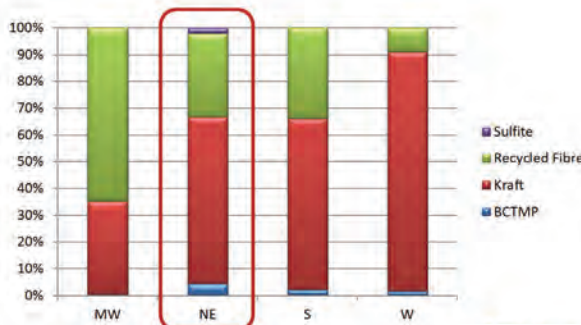


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Figure 6 Northeast USA T&T technology base

Northeast USA T&T Fibre Base

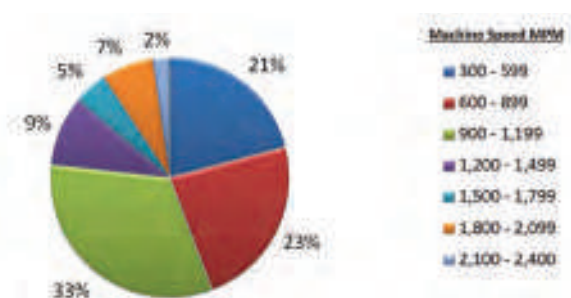


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Figure 7 Northeast USA T&T fibre base

Northeast USA T&T Machine Speed Distribution

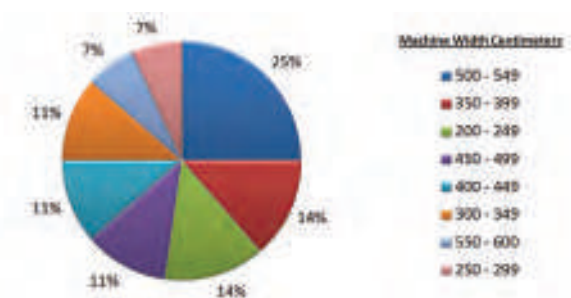


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Figure 8 Northeast USA T&T machine speed distribution

Northeast USA T&T Machine Width Distribution



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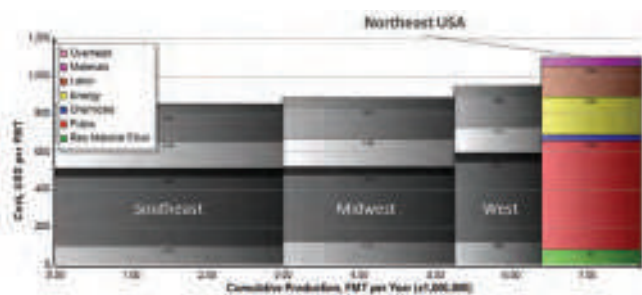
Figure 9 Northeast USA T&T machine width distribution

At a machine level there are very dramatic differences. The range is from 1.12 on the low end to 2.70 on the high end. Raw materials contribution is fairly consistent across machines. Purchased electricity and, more importantly, fossil fuels vary greatly.

Greenhouse gas emissions and the associated regulatory activity are likely to be a future cost consideration in the US as well as worldwide. Average United States emissions per tonne of T&T (MT CO₂ eq./FMT) is 1.683 CO₂ eq. The US Northeast averages 1.999 CO₂ eq., slightly higher than the worldwide average but lower than all but the West within the US (Figure 12). At a machine level there are very dramatic differences. The range is from 1.12 on the low end to 2.70 on the high end. Raw materials contribution is fairly consistent across machines. Purchased electricity and, more importantly, fossil fuels vary greatly. Some of this variation is fuel differences. More significant however is the influence of TAD and the high gas consumption associated with this process. Presumably, as restrictions tighten, the cost of mitigation could be a significant factor in overall cost competitiveness for some players.

The source for market data and analysis in this article is FisherSolve™. Data tables behind Figures 1 –12 can be obtained from Fisher International. E-mail requests to info@fisheri.com.

USA T&T Cost Curve by Region

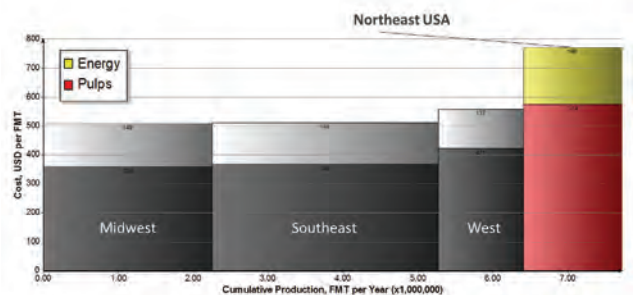


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Figure 10 USA T&T cost curve by region

USA T&T Energy and Pulp Cost Curve by Region

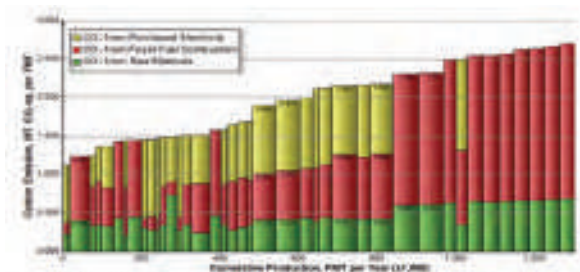


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Figure 11 USA T&T energy and pulp cost curve by region

Northeast USA T&T Machines' Carbon Emission Curve



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Figure 12 Northeast USA T&T machines' carbon emission curve

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Fisher International supports the pulp and paper industry with business intelligence and management consulting. Fisher International's powerful proprietary databases, analysis tools, and expert consultants are indispensable resources to the industry's producers, suppliers, investors, and buyers worldwide.

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US: Battle for value and volume growth hots up in mature market

With per capita volume consumption of retail tissue standing at 14kg, the US has the highest usage rate of retail tissue in the world. While this should not come as too much of a surprise, there must be some level of healthy cynicism that occurs when one talks about growth in a mature retail tissue market such as the US. Tissue is a low-margin product that does not receive a lot of attention from the public and there are many ongoing challenges facing the industry in terms of market saturation, increasing competition from private label products, discounting and promotions. That being said, there also continues to be opportunities in this space, as a better understanding of population trends in the US, coupled with innovative marketing, social media and consumer insights, can provide a pathway to cementing better consumer relationships.

US retail tissue sales reached US\$18 billion in 2015, an increase of 1% on 2014. The US is a mature market for many consumer packaged goods – and retail tissue does not stray from this diagnosis. Due to high penetration rates for tissue products among the population, it does seem that growth is simply tied to population growth for the foreseeable future. Population growth in the US is mainly coming from a steady

birth rate and immigration. In 2015, there were 12.4 births per 1,000 people in the US, and, over time, this will continue to decrease as people wait longer to have children, not to mention the continuous rise in the cost of raising a child in the US.

The total population in the US grew by 1% in 2015, which is consistent with the 1% volume and value growth seen within retail tissue in the US in the same year.



Jabel Parayil

Analyst – tissue & hygiene,
Euromonitor International

“The US is a mature market for many consumer packaged goods – and retail tissue does not stray from this diagnosis.”

USA, retail tissue volume, tonnes, % year-on-year growth vs population growth

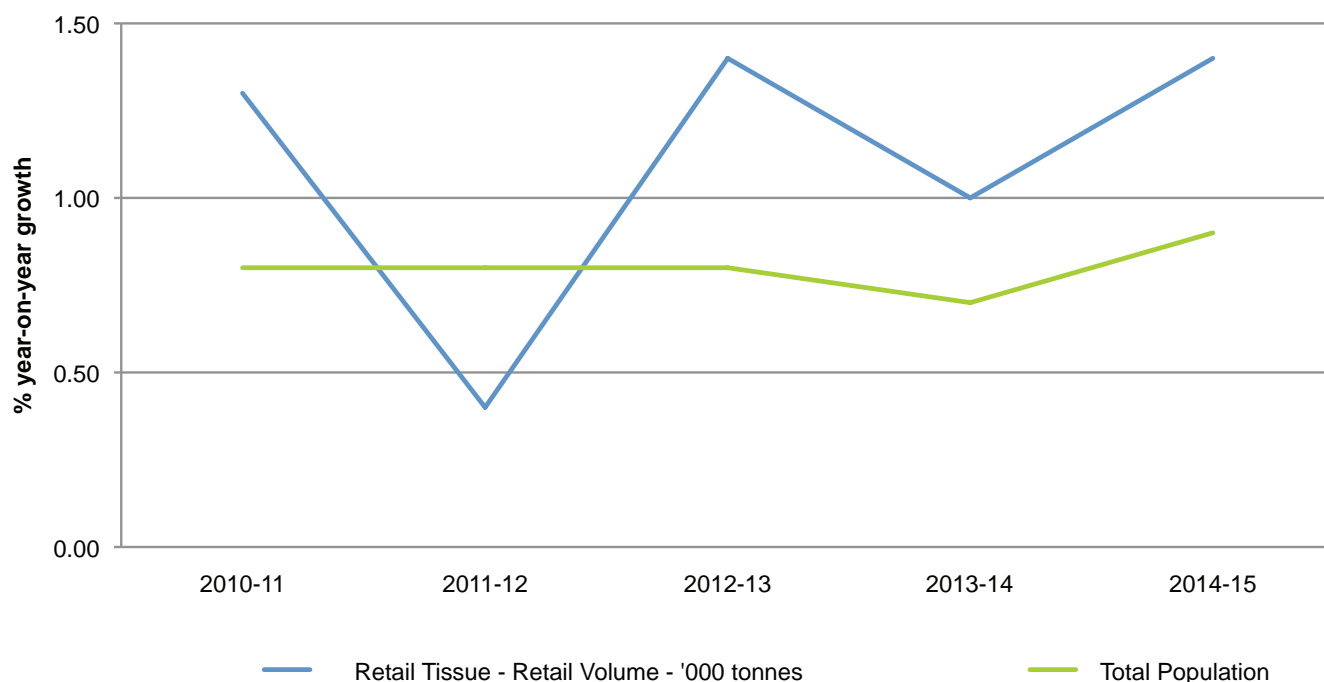


Table 1: USA, retail tissue volume, tonnes, % year-on-year growth vs population growth

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By Euromonitor International's Jabel Parayil

Retail toilet paper saw continued growth in 2015 with volume and value sales increases of 2% (US\$, 2015 fixed exchange rate). Such growth is consistent with overall population growth and continued premiumisation in this space. Increasingly aware of consumers' recognition of "small comforts", both large brand owners and private label manufacturers have continued to advertise the benefits of multi-ply and now even scented toilet paper. Kitchen towels also saw slight growth in 2015 in both volume and value terms. Kitchen towel volume, measured in tonnes, grew by 1%, while value increased by 2% (US\$ 2015, fixed exchange rate).

Private label applies pressure

US consumers continue to be reluctant to pay premium prices for tissue products that they feel are of a lesser quality. With the rush of private label products into the tissue space over the past few years, consumers now have even more choices when it comes to their tissue needs. This has also led to market saturation in the retail tissue space as the large brands find themselves with more competition. The strength and brand recognition of large retailers has given them the incentive to create their own brands to compete with large national brands for shelf space and consumer dollars.

While private label has been a part of the retailing landscape for many decades, the traditional idea of private label products being sub-par has gone out the window. Premiumisation is at the core of current private label trends in the tissue category.

In order to ensure competitiveness with the leading branded products, private label brands are utilising new technology to stay ahead of the game, rather than merely following in the brands' footsteps. Additionally, products with environmentally-friendly claims as well as more traditional strategies, such as rebranding and improved visual

appeal, are starting to make their way on to store shelves.

Private label brands have also engaged in multi-tiered pricing schemes in order to accommodate both the value and premium ends of the product spectrum within the same category. This mirrors the actions of the large brands and has resulted in even more competitive pressure in the tissue category.

For example, Wal-Mart's Great Value toilet paper brand has options for an economy, ultra-strong and ultra-soft type of toilet paper, all of which are at differing sheets per roll price points. The share of private label sales in retail tissue in the US increased by an 18% CAGR over the 2010-2015 period.

Such growth shows that American consumers are both price and quality conscious when it comes to retail tissue products and are more than willing to spurn large brands in order to gain what they believe to be better deals in the private label realm.

Procter & Gamble is still top dog

Retail tissue in the US maintains a strict hierarchy that has been in place for quite some time. Procter & Gamble, Kimberly-Clark and Georgia-Pacific have been the top players in this space and make up the majority of branded sales. Procter & Gamble is the king of tissue in the US with a 32% sales share. With iconic brands such as Charmin and Bounty, Procter & Gamble products are well known by the American consumer. However, they declined by 2% in 2015 in volume sales of retail tissue. Procter & Gamble reported difficulties in driving sales and value due to competitive

pressures and price promotions. Market saturation and price promotions have soured the outlook for large brands.

Tissue manufacturers in the US should be worried about malaise and being behind the understanding of what the consumer wants. Tissue products are a staple in the majority of US homes, with high penetration rates regardless of socioeconomic background, but decisions on purchasing are often due to price point or promotions run by retailers. American consumers may have the money to spend, but they want to feel that they are receiving a quality product for the price that they are paying.

After all, they are more than happy to utilise multiple tissue products in order to replace the segmented categories that manufacturers have created to drive revenue. We have seen this in the past, when napkins and toilet paper have often been used in place of facial tissue.

Working for opportunities

While the competitive environment of retail tissue has become saturated and larger brands are having a harder time driving sales, there are still opportunities that exist for manufacturers in the US tissue market.

Social media and company reviews are becoming increasingly important for companies that seek to understand real world customer satisfaction with their products. These tools provide opportunities for manufacturers of tissue products to engage with their consumers and, additionally, the high penetration rates of smartphones throughout the US gives manufacturers of tissue products a digital avenue where they can display their brands.

"Procter & Gamble is the king of tissue in the US with a 32% sales share. With iconic brands such as Charmin and Bounty, Procter & Gamble products are well known by the American consumer. However, they declined by 2% in 2015 in volume sales of retail tissue."

US Retail Tissue, % Company Shares, 2015

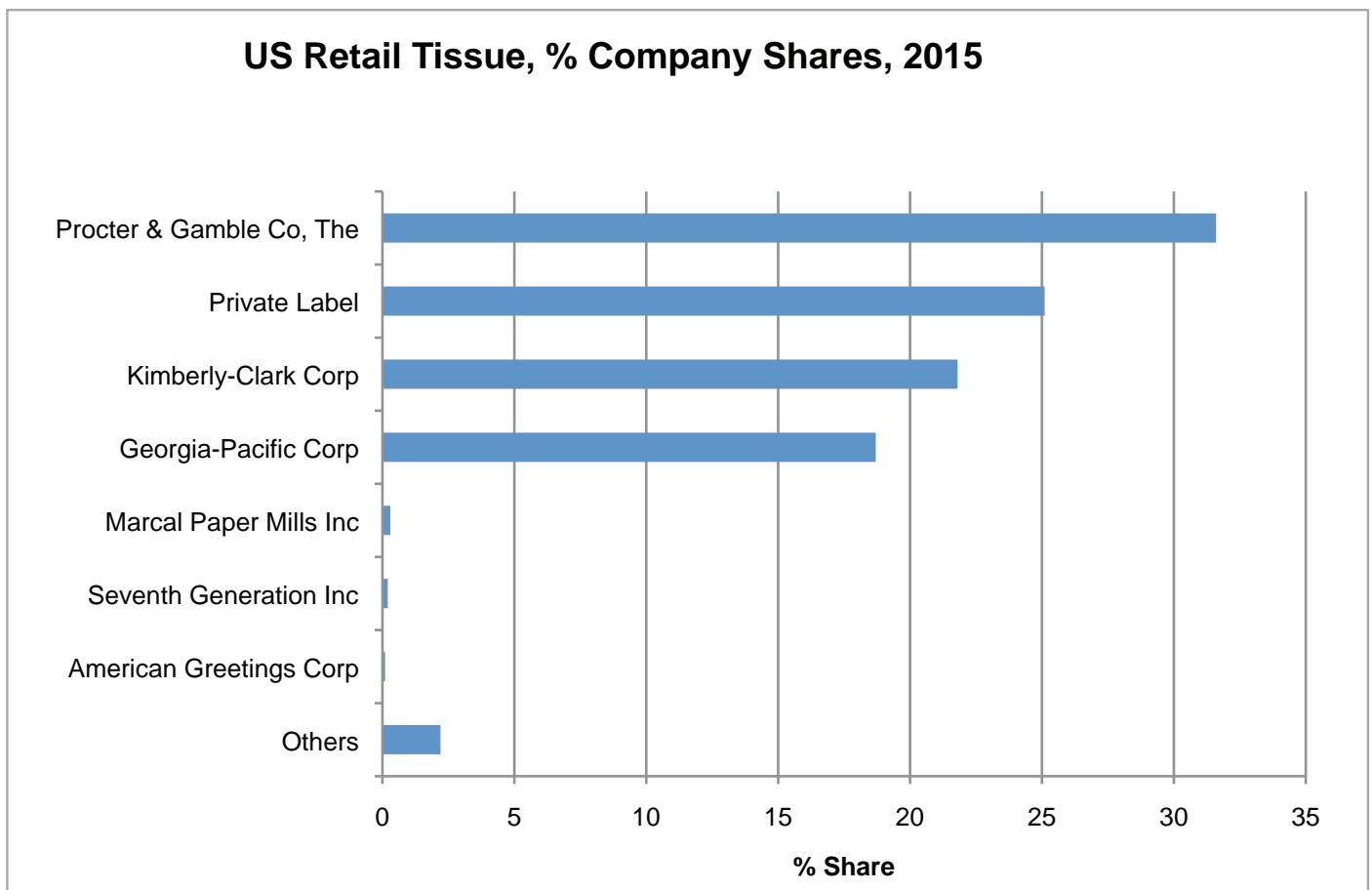


Table 2: US Retail Tissue, % Company Shares, 2015

With practically everyone having internet access at their fingertips in the US, there is ample opportunity for marketers to drive their agendas to the consumer. Special discounts, interesting marketing techniques via commercials or sporting events, or even the occasional shout-out from a celebrity can allow brand

The growing influence of the millennial consumer has also provided manufacturers with opportunities to rethink how they market their tissue products. Brand loyalty is not top of the list for millennial consumers, and other important aspects such as eco-friendliness and price point can all play a

engaging the consumer in unique ways.

With over 69,000 followers on Twitter, Procter & Gamble's Charmin brand of toilet paper is cultivating a relationship with its fans. Daily interaction includes various surveys and its #TweetFromTheSeat campaign has garnered additional media attention as it seeks to bring humour to the nature of toilet paper.

While such advertising does not immediately equal value sales, it does build upon the idea of engaging the consumer in a way that makes the consumer feel attached to a particular brand and helps build brand equity in the eyes of the public.

While millennials may not feel particularly loyal to a specific brand, they do like the idea of interaction with a brand and this, coupled with quality and price point, can allow larger brands to gain additional traction in a highly competitive environment.

"Brand loyalty is not top of the list for millennial consumers, and other important aspects such as eco-friendliness and price point can all play a part in better understanding where there are specific opportunities to market to this increasingly important demographic."

owners to get their message across to millions of consumers via Twitter, Facebook or Instagram.

This type of messaging allows for consumers of tissue products to better understand the brands and really identify with them in order to drive both value and volume sales.

part in better understanding where there are specific opportunities to market to this increasingly important demographic.

Indeed, it is often very hard to see where the next "true" innovative product may come from in the tissue category. That being said, companies such as Procter & Gamble and Kimberly-Clark are

Understanding the population

The tissue industry must also understand how the population is changing throughout the US and where opportunities may lie by understanding these changes. While the population is forecast to increase at a CAGR of just 1% over the 2015-2020 period, there are other factors that should be taken into account when looking at population.

Population distribution within the US is largely concentrated in the Northeastern part of the country. This being the case, it is therefore understandable that, traditionally, due to higher capacities of consumption, it is beneficial for some manufacturers to remain close to areas of high consumption in order to reduce distribution costs. For example, St Croix Tissue, a Chinese-owned company making tissue paper in the US, recently bought the Woodland Pulp mill in Baileyville, Maine, and will be updating the mill with new manufacturing technology in order to increase capacity and efficiency.

Gaining traction in the Northeastern corridor allows for easy access to transportation to large metropolises for tissue products. This example also highlights the fact that there is active foreign investment in the US for tissue. This may have to do with efforts to spread risk in a highly volatile global economy and gaining access to a market that has low but constant growth.

While the Northeastern part of the US may contain the largest concentration of the population, the strongest population growth is seen in the Southern states. This can be attributed to increased job opportunities, a lower cost of living and Hispanic immigration.

"Hispanics now make up close to 17% of the US population, or approximately 55 million people. The tissue industry has taken notice of this demographic to some degree over the past few years, with companies such as Procter & Gamble and Georgia-Pacific rolling out specific scented tissue products."

In the US Census Migration Flows Between Regions, by Income in 2014, Labor Force Status, Major Occupation Group, and Major Industry Group: 2014 to 2015 report, more than 800,000 people over the age of 16 moved from the Northeast, Midwest and the Western parts of the US to live in the South.

That being said, manufacturers must be aware that the concentration of wealth in the Southern part of the US is much less compared to the other parts of the country, with US Census data from 2014 showing the median household income reaching only US\$49,655, compared to regions such as the Northeast or West, where median household incomes are US\$59,210 and US\$57,688, respectively.

Knowledge of population migration and median household income by region opens up opportunities in terms of understanding where consumers will be residing, what specific retailers they will shop at in order to buy tissue products, and can help in minimising supply chain costs for manufacturers. Manufacturers must overlay this understanding of population movement with recognition of how Hispanic immigration is also changing the face of the population in the US.

Hispanics now make up close to 17% of the US population, or approximately 55

million people. The tissue industry has taken notice of this demographic to some degree over the past few years, with companies such as Procter & Gamble and Georgia-Pacific rolling out specific scented tissue products in order to cater to the tastes of the Hispanic consumer.

However, Hispanic consumers represent a diverse and vastly misunderstood consumer segment in the US and manufacturers must be vigilant in tracking the changing habits of this consumer base. That being said, the addition of scented tissue products to large tissue brands' portfolios does showcase a move in the right direction in order to bring added value to the category and increase revenues.

Manufacturers can utilise the understanding of population movements within the US and the changing demographics of the country to create a better supply chain to keep costs down, and to create products that specifically appeal to consumer groups based on background.

Euromonitor International forecasts that the retail tissue category in the US will grow at 1% CAGR over the 2015-2020 period. Due to the US being a mature market, increased marketing and advertising tied in with innovation and a better understanding of population movement and growth are areas where there needs to be more investment from the industry in order to reignite growth. All of this, however, must be done with the recognition that the US consumer demands quality products at a reasonable price.

"St Croix Tissue, a Chinese-owned company making tissue paper in the US, recently bought the Woodland Pulp mill in Baileyville, Maine, and will be updating the mill with new manufacturing technology in order to increase capacity and efficiency."

Opportunity on “our doorstep” – or as it’s otherwise known ... New York

The great metropolis is also “a great waste paper basket,” says Soundview Paper Company chief executive Karl Meyers who has targeted recycled and virgin fibre T&T. The key issue is still “how do we get chosen first?” Helen Morris, TWM editor, reports from New York.

Driving underneath the towering skyscrapers that make up Manhattan’s iconic skyline, past bustling Madison Square, the Empire State building and through Lincoln Tunnel where the Hudson River meets the Atlantic Ocean, TWM emerges into one of the five densely populated boroughs providing just some of the demand for Soundview Paper Company.

The Elmwood Park, New Jersey-based plant is hard to miss. A large, lit-up red sign with the “Marcal” tissue brand, established by founder Nicholas Marcalus in 1932, is proudly displayed above the mill, giving passers-by a hint of the site’s historic past and modern present.



Helen Morris

Editor,
Tissue World magazine

TWM is cheerfully greeted by Soundview’s chief executive Karl Meyers, vice president of operations Ben Wenberg, executive vice president of sales and marketing John Glaze, and president Rob Baron. The sum of the knowledge and experience within the room is impressive - over 150 years in tissue and recycled fibre-based business. Meyers worked from 1997 - 2008 as vice president manufacturing for Georgia-Pacific; Wenberg from 1993 - 2013 in operations leadership, logistics, and finance roles at Kimberly-Clark.

The site previously operated as paper recycler and manufacturer Marcal Paper Mills until the struggling business was acquired in 2012 by Atlas Holdings. The Greenwich, Connecticut-based Atlas, with a long history of successful operations within the pulp and paper industry, then established Soundview Paper to take over and transform the mill into a manufacturer of recycled and virgin fibre towel and tissue products for the local At-Home and AfH markets. Meyers was named chief executive in September of

“The site previously operated as paper recycler and manufacturer Marcal Paper Mills until the struggling business was acquired in 2012 by Atlas Holdings. The Greenwich, Connecticut-based Atlas, with a long history of successful operations within the pulp and paper industry, then established Soundview Paper to take over and transform the mill.”



The Elmwood Park, New Jersey-based plant was established by founder Nicholas Marcalus in 1932



The site boasts 23 converting assets, as well as fully integrated deinking, towel, tissue, napkin and facial production

2014 and is one of the original industry leaders who started Soundview Paper. "We took a distressed business and made it profitable," he says. "The two PMs which were previously idled due to demand are now running full time. We almost grew too quickly but we're growing in alignment now and in places where we expect to win."

The flagship operation is located 12 miles northwest of New York City. Walking around the site you catch glimpses of its history: the corner stone on the mill's entrance dates back to 1932, the building's walls are its original walls, and once in the reception area there's a wall full of Marcal's advertising campaigns spanning over 80 years – including a picture of Elizabeth Taylor with a box of Marcal Hankies in the background.

The site now encompasses more than one million square feet of manufacturing and storage facilities on a 30-acre site, boasting fully integrated deinking, towel, tissue, napkin and facial production, 23 converting assets (nine bath winders, three towel lines, two facial, and nine napkin lines), as well as

separate storage facilities for housing finished goods and parent rolls. It manufactures the Marcal brand of tissue products for AfH, office, private label and retail customers, using recycled paper collected from the densely populated metropolis on its doorstep. Annual tissue capacity is 120,000 tonnes, the site's deinking lines match paper machine capacity, and the 23 converting lines convert 120,000 tpy.


PM10 was installed in 1978 and is the site's "work horse, our heavyweight", while PM11 is "the crown jewel, matching efficiency with speed." Both PMs run virgin or 100% recycled paper and at very high speeds.

Over six decades ago, Marcal developed and implemented technology for recycling waste paper into pulp, making

it one of the earliest companies in the paper products industry to go green. Today, Soundview offers a broad line of 100% recycled bath tissue, paper towels, napkins and facial tissue for both home and commercial use, all manufactured without chlorine bleaching, fragrances or dyes. Some 200,000tpy of recyclable paper are used in the manufacturing process. "We have a great green story," Wenberg says.

The company has "a great opportunity right here on our doorstep", according to Meyers. Statistics in 2013 reported 1.62m people on Manhattan Island, while 8.40m people are based in the whole of the Big Apple. While growth in the region isn't large, Meyers says it's stable at around 2% and is continuing to grow. "In terms of the demographics, we have more than enough growth here

"We took a distressed business and made it profitable," he says. "The two PMs were shut down and now we're running full time. We almost over grew but we're growing in alignment now and play best where we have a right to play."



"When you're not the big 800 pound gorilla company, you can be flexible and pick what suits you. One of our strengths is that we're small enough to be nimble, but we also have strong backing with Atlas Holdings."

to sustain our facility. We're also in a great waste paper basket and close to the north east pulp market. We have great assets here, having a well associated brand and being located 12 miles from a heavily and densely populated area such as NYC."

With the younger generations nearby, Meyers adds the company is seeing a change in how they consume: "They want tissue products delivered to their door rather than having to carry packs on the subway. More and more they're using online to have their groceries, tissue products, etc, delivered." In response, the Marcal brand has been one of the first to have its brands offered through major e-tailing sites, and its products offered for bulk deliveries to homes and office. "The

key issue is still how do we get chosen first? That's key. Digital marketing is a big growth market for us. Online retailers are now making four-hour deliveries. What helps us is that the Marcal brand is so strong and well-established. Even when retail purchase habits are changing so quickly, kids remember their mom or dad bringing the Marcal brand home."

While America is a brand-driven culture, changing demographics, less brand loyal Millennials and the influx from immigration means many people today don't have the same brand-driven focus. "We're looking to increase our overall volume, so while we're seeing AfH and At-Home growing, there's also opportunities for private label growth," Meyers says. "While it's

not like it is in Europe, private label is growing more and more."

He adds that for the At Home retail sector, quality, service and price are the main deciders - and the main opportunities for the business.

"Being diversified, our strategy into the marketplace is that we're sheltered. When you're not the big 800 pound gorilla company, you can be flexible and pick what suits you. One of our strengths is that we're small enough to be nimble, but we also have the unique advantage of being part of Atlas Holdings. Their experience in successfully growing and strengthening pulp and paper businesses gives us yet another competitive advantage."

Outlook for World Tissue Business

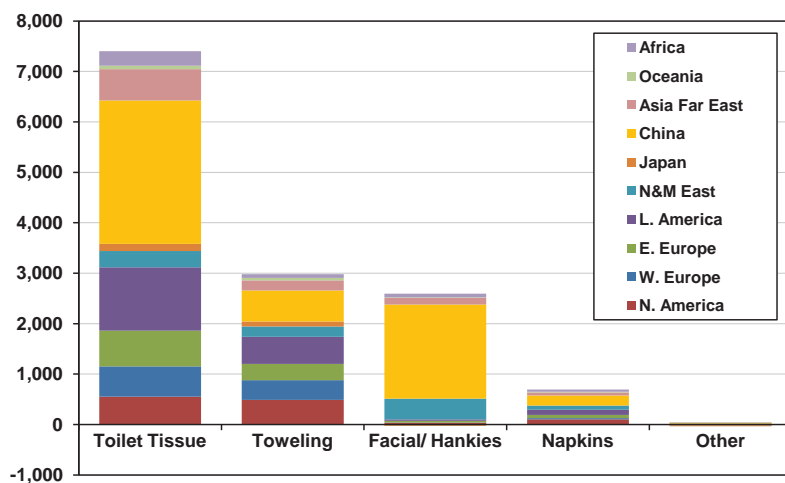
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The most comprehensive, unparalleled, compact data source and forecast for the global tissue market!

RISI's Outlook for World Tissue Business provides insight into recent changes and future growth prospects for the global tissue industry. The study provides details for each key region including key players, supply, demand and operating rates with forecasts up to 2023.

The global tissue industry has experienced strong growth since the global recession. Growth rates have returned to between 3.1-3.9%, after plummeting to 1.2% in 2009, and the global market continues to be in a strong expansion phase. China leads volume growth, followed by North America, Western Europe and Latin America. Over the forecast period, China is expected to continue to export tissue to other regions with a net export surplus growing from 820,000 tonnes annually in 2014 to about 960,000 tonnes by 2018.

Expected Volume Growth in Tissue Markets by Product and Region, 2013-2023
Thousand Tonnes



This study details:

- Driving forces for future demand – broken down by region
- When the tissue business will take – off in countries such as India
- Current and future growth rates and volumes by region
- How world tissue demand will develop – by region and by sector/product
- Global tissue consumption by product and by market segment
- Who the major suppliers and what their strategies are
- The new committed projects by region, and how these will affect operating rates
- The technology and retail trends that will shape the future

By Tissue World magazine editor Helen Morris



Papermakers at the historic site which manufactures the Marcal brand of tissue products for AfH, office, private label and retail customers

"We have the capacity to grow the market," he adds. "We have a strong brand and we've taken that and added to AfH, diversified our product offering with the Putney purchase, added At-Home, office and also online and private label."

Energy remains one of the key challenges and the site works tirelessly to reduce its natural gas and electricity usage. Some 73% of its energy now isn't generated by coal. "We are fanatically focused on reducing our cost of production. And during winter it gets restrained, mild winters are our friend." Its At-Home segment serves the local region only: "We have to stay close because of the freight costs. For AfH, that's slightly less the case."

In 2013, Soundview acquired Putney Paper, a Vermont-based towel and paper products manufacturer. The purchase allowed the company to diversify its AfH product offering to produce a broader range of commercial towel manufacturing capability into its finished paper products offering of tissue, towel and napkin products to retailers, distributors and other

customers. Meyers says that future growth for the business is more likely to be organic growth rather than another Putney Paper sort of acquisition: "We wouldn't necessarily reject an opportunity out of hand, but it's not part of our immediate business strategy. The growth is here; we're in these markets and we will continue to grow in them."

"We have the paper-making capacity to grow the market," he adds. "We have a strong brand and we've taken that and added to AfH, diversified our product offering with the Putney purchase, added At-Home, Home and Office (online) and Private label. While we have the capabilities to have a national brand, it's not the history of this mill. To grow our products, we opened up new markets. The more we grow, the better we seem to get. We are extremely excited for the future of this business."

FACTFILE

Location: Soundview in Elmwood Park, New Jersey; Putney Papers in Vermont.

Founded: Soundview Paper was established in 2012; the Marcal Paper mill was founded in 1932 by Nicholas Marcalus.

Staff: 485 staff in Elmwood Park, 110 in Putney.

Products – AfH: bath tissue, paper towels, napkins and facial tissue for healthcare, hospitality, manufacturing, and foodservice to retail and office sectors. Marcal Pro® 100% recycled towel, bath, napkin and facial tissue products, including several certified by Green Seal™; At-Home; Marcal® brand, Marcal® Pride™; private label customers; parent rolls in virgin and recycled grades.

Battle for the biggest Away-from-Home sector in the world

Table napkins are on a surge as Americans eat out more, enjoy 'fast casual' dining, and turn to the pleasures of the homeland and the 'staycation.' TWM editor Helen Morris heads out towards the Adirondacks to SCA's Hudson River mill.



The SCA South Glens Falls plant from above, 2015. Photo by American Images Custom Aerial Photography® Marshfield, WI (www.americanimages.com)

The slow and steady train journey to Glens Falls from the heart of Manhattan gives a taste of the stunning natural beauty in the region that is home to SCA's South Glens Falls tissue mill. Neighbouring tourist spots include the Adirondack mountain range, the Catskill Mountains, as well as rivers and valleys steeped in the history of the region's indigenous Mohawk people.

Located equidistant between New York City and Montreal, the plant sits alongside the magnificent Hudson River, which has always played a significant role for the area, not least as a major route for the Native American, British and Colonial forces during the Revolutionary War. For literary fans, the scenery and culture was also the inspiration for James Fenimore Cooper's classic tale, *The Last of the Mohicans*. Cooper's Cave – which offered protection to the characters in the story – is just around the corner.

During the industrial age, the vibrant timber industry used the river to float logs from the Adirondacks, enabling the local paper industry to flourish in the latter part of the 1800s. The construction of dams to generate hydropower from the river established an important economic base that still exists today.

With a forecast of heavy snow looming, TWM meets Mike Mound, SCA Tissue North America site manager, northeast operations, and Amy Bellcourt, vice president communications SCA AfH Professional Hygiene at the historic site. Built in 1864, the Swedish tissue giant took it over in 2002 and the

O

Helen Morris

Editor,
Tissue World magazine

plant now has 270 staff and processes 110,000tpy of 100% recycled paper, producing 64,000 metric tpy on two paper machines. The local region provides ample demand for the site's products, and the paper is converted into bath tissue, folded and hardwound towels and napkins that are sold into the regional AfH market including restaurants, offices and health care facilities across the northeast. Some 70% of production is for rolled product, jumbo rolls and hand towels while the remaining 30% is for napkins – a key growth market, according to Mound. Product innovation and diversification over the years has included universal products as well as premium products, dispensing systems for the food service, industrial, commercial and healthcare markets under the global Tork® brand of parent company SCA. There are also two deinking plants, and a second converting plant located 30 minutes away in Greenwich.

SCA was the driver of a significant step changer in the American tissue market last year when it acquired north American AfH company Wausau Paper – a move that increased its market share capacity by 6%. The move also boosted its geographical reach, adding two mills in Ohio and Kentucky to its North



The front office building of the plant was built in 1864 as the headquarters of the Glens Falls Paper Company. At the turn of the century it became the international headquarters for International Paper; **Inset:** A view taken from the bridge over the Hudson River, which joins Glens Falls with South Glens Falls

American portfolio as well as enhancing its premium tissue product portfolio - a PM with ATMOS technology that is less than three years old was included in the move.

SCA now claims the No 2 spot in America with 26% of the market, second only to Georgia-Pacific's 30%.

The Wausau acquisition is one of a number of purchases America has seen over the last couple of years. According to Poyry, in just the fourth quarter of 2015 M&A activity saw \$700m plus change hands with nearly all recent M&A activity focused on mill and converting assets for the AfH and private label retail tissue segments.

Resolute Forest Products comes from a print and paper background and announced its entrance into the tissue market in 2015, speeding up its entry with the acquisition of Atlas Paper in November 2015.

Home to the largest AfH sector in the world, this M&A activity has involved local and international tissue players as well as local graphic paper producers. They continue to be drawn to a market that offers stable growth and low private label concentration: Sofidel entered into the American market in 2012 with the acquisition of retail and AfH producer Cellynne Paper, boosting its presence further with the acquisition of

Green Bay Converting in 2015; Hong Kong-based International Grand Investment – owner of Woodland Pulp in Maine – has recently started a new PM on site with another in the works; Georgia-Pacific increased its AfH offering with the purchase of SPG Holdings in 2014; Kruger Products boosted its AfH presence in 2014 after acquiring the converting assets of Metro Paper Industries; Orchids Paper spent \$37m to enter a "strategic alliance" with Mexican producer Fabrica de Papel San Francisco; and NPS Corporation doubled in size in 2014 with the acquisition of National Tissue Company, expanding further in 2015 with the purchase of Celtic Paper.

Interestingly, two major graphic paper producers also joined the race: Resolute Forest Products comes from a print and paper background and announced its entrance into the tissue market in 2015, speeding up its entry with the acquisition of Atlas Paper in November 2015. In December 2015, Catalyst announced it will convert its uncoated mechanical PM11 at its Powell River mill to begin producing a towel product.

The activity isn't surprising given the stable growth and also the potential of the region's tissue market and density of its population. Mound says growth is steady at between 1-3% year-on-year, and that as the region's demographics continue to evolve, new opportunities are presenting themselves to the tissue industry. "The growth trends we're seeing aren't slowing down and with the size of the population in America there's always a lot of potential. We can also ship to a large part of the population, which expands the potential even further."

By Tissue World magazine editor Helen Morris

He adds that the company is seeing a big increase in demand for napkins in the US: "People are eating out more and more, and we're also seeing people holidaying more at home. There's also a continual increase in "Fast Casual" dining and that's where our product is very economical." There's also additional export potential into Canada, which "offers a lot of opportunity" and also has different product demands.

And in terms of European players such as Sofidel increasing its share in the US market, Bellcourt says that that "doesn't affect us at all".

Energy price increases are a continuing concern: "It's a very regional issue, and it's one that is a particular challenge for us" says Mound. "We're continually focusing on our usage. We have a steam generator that re-uses energy so we're very energy efficient. We also have a new Steel Yankee and we're seeing a reduction of 3% year-on-year. We've also been upgrading our deinking processes so we can take more contaminants to make it white and bright. It's a challenge."

As for whether a third paper machine would be added at the site, Bellcourt was unable to comment on when and if an investment would be made: "We want to meet demand. We're seeing very fast growth here in the northeast. And what the Wausau acquisition brings us is a strong No 2 position and a presence right in the middle of the country. The ATMOS production means we're producing premium paper. And our Tork brand continues to remain strong and it has a sustainable image that is our primary focus here."

"The goal is to be market leader," she says. "We have a clear No 2 spot in America, we lead the market. We see lots of opportunities to grow, lots of synergies with Wausau Paper. For the immediate future we'll be integrating our products, we expect that integration to continue to happen and springboard from there. We have many exciting innovations: restrooms are our targets with the launch of "EasyCube", etc. This is what we want to be doing to get to the No 1 spot in America."



"Growth is steady at between 1-3% y-o-y and as the region's demographics continue to evolve, new opportunities are presenting themselves,"

Mike Mound,
SCA Tissue North America site manager, northeast operations



SCA's Tork Xpressnap dispensers

PIX Pulp indices 29.3.2016

NBSK pulp Europe

Even taking into account one more production and shipping day in February 2016 versus February 2015, the PPPC numbers published week 11 came out with predominantly positive news for the pulp producers, especially in the softwood grades. Total market pulp shipments were up from February 2015 by 5.1% and cumulatively by 4.8%.

For Western Europe, deliveries were up from February 2015 by 6.3% and by 3.5% over the first two months. Port stocks moved down by 0.8% from end January but were still almost 12% up from a year ago. Producer inventories came down by one day, both with and without seasonal adjustment. Market BSKP deliveries were globally up by 6.1% in February, y-o-y, and also up, by 4.7%, cumulatively.

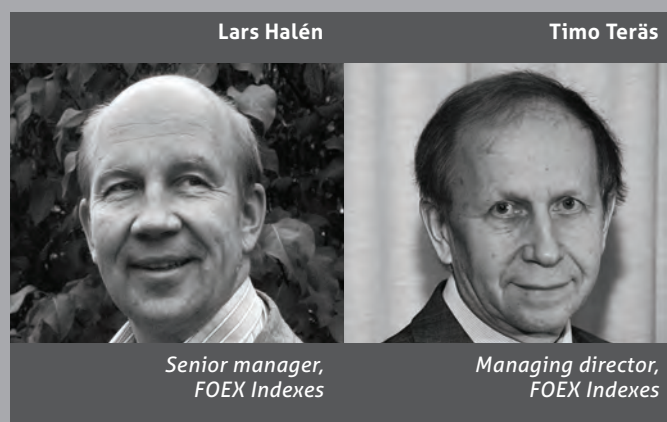
For Western Europe, the corresponding numbers were 2.3% and 0.3%. The shipment-to-capacity ratio was quite good in February at 95% for the grand total (down by one percentage point) and up from 93% to 94% in BSKP. Producer stocks in softwood pulp were flat both with and without the seasonal adjustment and four days lower than a year ago.

The modest further strengthening of the Euro by 0.3% against the US dollar (weekly average) helped stop the decline of softwood prices in dollar-terms but kept the Euro-prices on the recent downward trend. Our PIX NBSK index headed higher this time by 19 cents, or by 0.02%, and closed at 789.47 USD/tonne. Due to the moderate rise of the Euro against USD with last week's average exchange rate, the benchmark value in Euro fell by 1.72 euro, or by 0.24%, and the PIX NBSK index value in euro ended at 704.44 EUR/tonne, almost exactly 100 euros down from a year ago.

BHK pulp Europe

In BHKP, the shipments were very strong in early 2015. This limited the year-on-year gain in February, compared to softwood. These global market BHKP shipments from PPPC-member countries were still up more than what the extra day contributed, or by 4.7%, year-on-year, and up by 4.8% cumulatively over the first two months. February shipment-to-capacity ratio was 95% against 99% in February 2015.

Shipments of hardwood pulp to Western Europe were up by almost 10% in February, year-on-year, and by 6.2% over the first two months. With good delivery volumes and with some supply losses, due to downtime and conversion (Jari), producer stocks in BHKP came down by two days without seasonal adjustment and by one day with the adjustment. Compared to end February 2015, those stocks were, however,



Lars Halén

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Senior manager,
FOEX IndexesManaging director,
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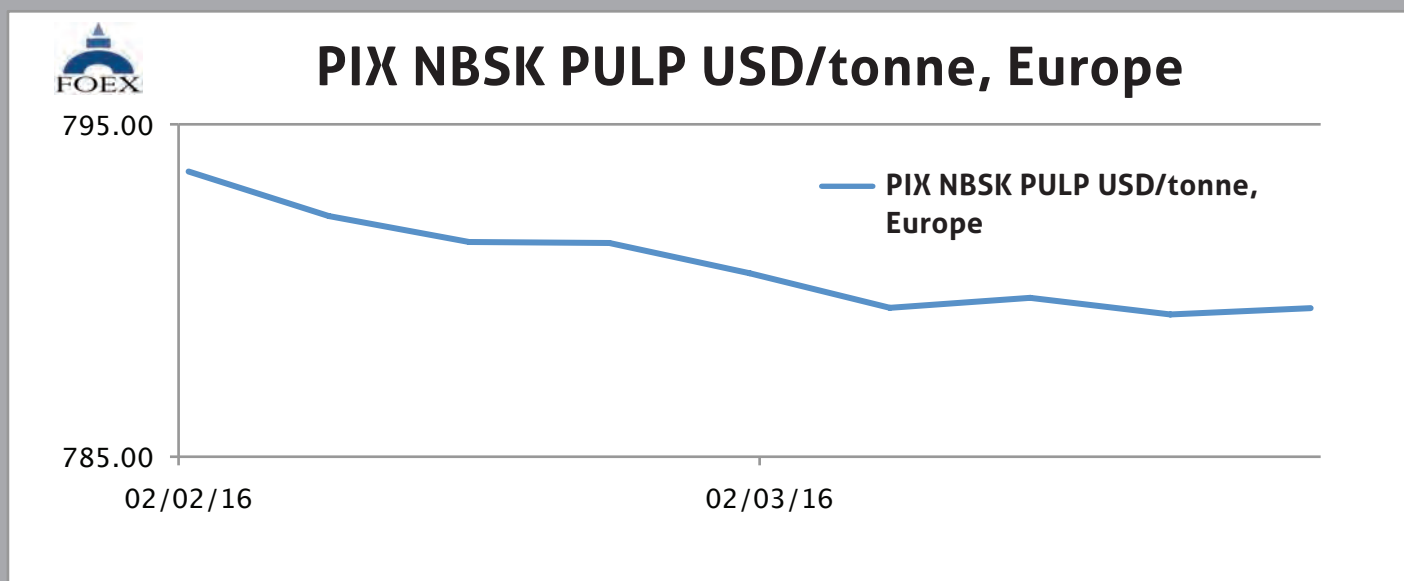
three-four days higher now. The already lengthy price decline continued in spite of the further strengthening of Euro.

Our BHKP benchmark moved down again, this time by 28 cents, or by 0.04%, and closed at 736.79 USD/tonne. The value of Euro appreciated by 0.3% against the US dollar (weekly average). When converting the USD-value into the stronger Euro, the PIX BHKP index value in Euro headed south by 2.01 euro, or by 0.30%, and the benchmark closed at 657.44 EUR/tonne.

Paper industry

The additional data received on the paper industry performance in February provides further confirmation that the overall industry performance was in relative terms slightly better in February than in January. European graphic paper demand and total shipments, including newsprint, were down from last year by 1.6%. Adjusted to the additional shipping day, that meant a 5% drop, more or less the same as in January. But the improvement seen in North America – with printing and writing total shipments up by 3.3% in February, year-on-year, after a very weak January and the expected gains in other grades than graphic papers in Europe lift the February results above those seen in January. However, this continues to mean that the weakness in the graphic paper sector persists and that the start of the year suggests only a very modest increase in global paper and paperboard industry production and shipments in 2016 over 2015.

Source: FOEX Indexes



FOEX Indexes 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.

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Fibre of the future

With substantially more softwood pulp capacity coming on stream, what are the benefits for the tissue maker? Södra Cell's marketing director Marcus Hellberg talks to TWM. A TWM report.

The steady growth in global tissue consumption creates a great opportunity for tissue producers. But bearing in mind that tissue is essentially made from wood fibre, can we be sure there is enough of the raw material to sustain foreseeable demand? With the substitution of softwood with hardwood fibre and the proliferation of hardwood pulp capacity based on fast-growing plantations in South America, maybe there is nothing to worry about.

Yet as the proportion of softwood in the fibre mix has fallen, the demands

placed on the remaining softwood fibres are that much heavier. The tensile properties which softwood delivers cannot be left to chance in a world which is not only demanding more tissue, but better tissue. Tissue makers require high-quality softwood pulp from a fibre source which is finite.

Fortunately, because it couldn't have been planned, the shrinking market for graphics grades has released substantial quantities of softwood fibre for other purposes, including tissue.

A turnaround in fibre availability

It wasn't so long ago that fibre in southern Sweden was in tight supply. Södra Cell faced competition for its members' wood from a variety of sources. But the closure of paper machines at Kvarnsveden, Braviken, Hallstavik and Hylte Bruk together reduced annual demand for wood by around 1.8 million m³. Meanwhile in Norway, closures of paper machines over 2012-2013, and Södra's shutdown of Tofte, resulted in around 2.2 million m³ less pulpwood demand in that country. Added to Sweden's 1.8 million m³, that makes 4 million m³ in the region.

It was in this context that Södra felt able to press ahead with the long-held ambition of expanding its Värö mill in southern Sweden. SCA also announced a project at Östrand further north shortly afterwards.

So as the SEK 4 billion expansion at Värö nears completion, with startup due in June, what is the potential impact for tissue makers and tissue making, bearing in mind the outcome will be an additional 275,000 tonnes per year of softwood, the vast majority of it FSC certified.

The capacity utilisation of softwood pulp mills has been creeping up while hardwood goes in the opposite direction, so this new capacity is certainly welcome. Ever since Canadian

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The shrinking market for graphics grades has released substantial quantities of softwood fibre for other purposes, including tissue



The SEK 4 billion expansion at Värö is nearing completion, bringing an extra 275,000 tpy of softwood pulp



Apart from new capacity, one of Södra's principal aims is to make pulp which is as consistent as possible.

softwood kraft shipments shifted to Asia in the mid-1990s, Europe's tissue brands have relied on Scandinavian pulp to meet their reinforcement needs and any risk of restricted supply would have spelled danger.

A more flexible process

Södra's spruce thinnings-based Black Z, with its combination of high softness and tensile, has all the credentials of the ideal tissue pulp. Even before the expansion, Södra had taken steps to ensure that most of it went to tissue mills. But while Södra's forestry resources grow every year in terms of standing timber, thinnings are finite and the new technology at Värö is designed to deliver tissue-friendly pulps from a more diverse fibre input. The increased ability to regulate chip size into the digester and manipulate post-digester kappa number are two important tools for Södra to influence quality and characteristics within the process.

And the fact remains that in the northern Nordic region, with a very short window of warm weather, fibre walls experience short, sharp periods of growth, which makes them thinner and better for soft tissue. By contrast in southern Europe,

dominated by radiata pine, the growing period is fairly constant throughout the year, resulting in a thicker fibre wall that is not so great for softness. Northern bleached softwood kraft (NBSK), in all its guises, has inherent advantages for tissue.

lab and at full scale are often time-consuming and results can take weeks to process."

Södra's virtual refiner (VR), can help provide the answers with just a few clicks of the mouse. The key to its success is a carefully-compiled database

The fact remains that in the northern Nordic region, with a very short window of warm weather, fibre walls experience short, sharp periods of growth, which makes them thinner and better for soft tissue. By contrast in Southern Europe, dominated by radiata pine, the growing period is fairly constant throughout the year, resulting in a thicker fibre wall that is not so great for softness.

The virtual refiner

Whatever the qualities of the raw material, the optimisation of the pulp mix is a high-precision business. Catharina Fechter, research engineer at Södra Innovation & New Business, says: "We are often asked about the impact on paper properties of modifying pulp recipes and we frequently get questions about optimizing energy in the refining process. The trouble is, tests in the

containing close to 100 different pulps, including all the common hardwood and softwood options available on the market. Each one has been refined and tested at Södra Innovation's lab on its pilot refiner so customers don't have to go through the process of testing them. The virtual refiner can mix up to seven different pulps and visualize all the common fibre and paper properties such as tensile, tear, fibre strength, fines etc. It interpolates between refining energy points, and then displays a curve

The tougher the fibre, the wider the operation window. The less tough the fibre the more important an adjustment of SEL becomes, to avoid paper properties deteriorating. Soon, customers will be able to simulate SEL for each pulp and blend them in a heterogeneous refining system, but more work needs to be done at Södra Innovation first, to describe the effect on pulp blends in a homogeneous refining system in more detail.

for each property. All this has helped Södra to build a significant amount of knowledge covering most of the world's pulps.

Fechter adds: "We are saving the customer time because we've already built the database and done the investigations on all the different pulps available. Of course, we hope to show our customers what they can achieve using the wide range of Södra's pulps, but we can also help them find an alternative if we can't offer something that a competitor can, or if we feel they can achieve better results by changing their pulp mix. It's about transparency and trust."

A recent addition to the VR is specific edge load (SEL), a parameter which depends on refining conditions and acts differently with different fibres. Fibre strength and morphology are crucial in-data and are used to divide the sample range into more or fewer tough fibres.

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"By discussing with their product manager what they want to achieve, our customers can see immediately how changing the furnish could affect both new and existing products," says Fechter. "They can decide if they want to work on the process or the furnish. If it's the process, they simply tweak the settings on the VR to see the effect on refining energy and so on. Or they can change the input mix and see the effect of different fibre loads. This tool really

helps us work with our customers to generate the best results they could hope to achieve."

Consistency a top priority

Apart from new capacity, one of Södra's principal aims is to make pulp which is as consistent as possible. As such

the results of the VR will be a highly reliable indicator of the way in which a pulp will perform. It also means that tissue makers will be required to make fewer adjustments to their processes, such as degree of refining, which affect runnability and final product characteristics.

Södra's target at Värö has always been to minimise the post-pulping refining necessary by maximising tensile within the process. The less refining that is necessary to boost tensile, the softer the tissue which can be produced with the pulp. This optimisation process will continue with the expansion.

This article was written by Marcus Hellberg, Södra Cell, marketing director.



Europe's tissue brands have relied on Scandinavian pulp to meet their reinforcement needs.

When you are dealing with those messy creatures – otherwise known as children – nothing beats a wet wipe

Originally from Australia, Mary-Lou McDonald is a serial traveller and has lived all over the world working primarily as a nanny, in which profession her keen interest in the martial art of Muay Thai – she trains a lot in Thailand – can help if needed. She currently lives and works in Sydney.



"The tissue products I use are toilet paper, paper towels and wet wipes. I use paper towels and wet wipes a lot because I look after children and they are very messy creatures. Every meal there is something spilt at the table so we always have a roll of paper towel on standby to clean up the mess. I also use it to wipe the stove with as it gets very greasy and paper towel is disposable. Although at home I use cloth to wipe the stove as it's more economical and I always forget to buy paper towel.

"Wet wipes are great to not only wipe the children's behinds but for sticky hands and faces. I have also used the disinfectant wipes when the children have been potty training and they leave "accidents" lying around the house. It's reassuring knowing I can clean up the mess in a hygienic way by throwing away the wipe.

"For toilet paper my buying preferences depend on what is on sale at the local supermarket. I try to buy the big value packs but occasionally I'll get the smaller packs from the local corner store if it's an emergency.

"Members of the family I nanny for do their shopping online and will order everything in bulk and of the best quality as there are five people in the household, so they go through a lot.

"My family used to purchase wet wipes that were flushable to give you that extra fresh feeling after toilet paper. Although we decided to stop because we heard on a current affairs show that they were getting stuck in houses' drainage pipes and causing big problems.

"Instead of buying environmentally friendly products I just try to limit the amount I'm using. If I can avoid using paper towel and use a cloth instead I will but it is still always tempting as a quick disposable fix.

"I lived and worked in Spain for a year and I noticed a lot of the toilet paper there wasn't as luxurious as it is in the UK and Australia. I also spent a month living in Thailand where I was at a Muay Thai camp and I was amazed how cheap the toilet paper is there."

"For toilet paper my buying preferences depend on what is on sale at the local supermarket. I try to buy the big value packs but occasionally I'll get the smaller packs from the local corner store if it's an emergency. The family I nanny for does their shopping online and will order everything in bulk and of the best quality as there are five people in the household, so they go through a lot."

Strength and softness – how NBSK pulp fibres deliver

Canfor Pulp, the world's fifth largest supplier of softwood kraft pulps, planted 78 million trees in 2015 alone in British Columbia, Canada. Here, manager of innovation and optimisation Paul Bicho explains the latest technologies involved in structuring the tissue sheet to generate bulk, softness and absorption. A TWM report.

Fibre is a major contributor to the overall cost of tissue manufacturing, typically accounting for 50% of total cost of the finished product. Furthermore, fibre quality is a key contributor to tissue quality, influencing such attributes as softness, bulk and strength. The highest quality tissues incorporate some virgin pulps, usually a combination of long fibre (softwood) and short fibre (hardwood) kraft pulps. The hardwood fibres are primarily eucalyptus pulps that contribute to bulk and softness. The softwood pulps contribute to strength, which is needed during production and converting.

Some tissue products can be made from 100% hardwood pulps and are driven principally by cost. While these tissue products can be soft, strength is compromised with a negative effect on basis weight and lower performance in converting. The latest tissue making technologies involve structuring of the

tissue sheet in an effort to generate bulk, softness and absorption. This approach can produce highest quality tissue products that have a high bulk over basis weight combined with a high softness.

At Canfor pulp, we produce over 1,000,000MT of high quality kraft pulp annually through three kraft mills in Prince George, British Columbia, Canada. About 90% of this production is northern bleached softwood kraft pulp (NBSK) and the remaining 10% of the kraft pulp produced is an unbleached grade of equal quality. We also produce 140,000MT of paper annually and recently acquired a BCTMP in Taylor BC with over 220,000MT of annual production. About 25% of the NBSK production is used in the manufacture of premium quality tissue products by major tissue manufacturers in North America and Asia.



Canfor's NBSK pulp fibres are longer and finer than most commercially available softwood kraft pulps and the microfibril angles (the angle of orientation between the cellulose microfibrils in the fibre and the longitudinal axis of the fibre) are lower. These properties give the pulp fibres their strength advantage with minimal refining. The long, slender



Canfor Pulp's three kraft mills located outside Prince George, British Columbia, Canada, have a combined production capacity of over 1,000,000MT of kraft pulp per annum.

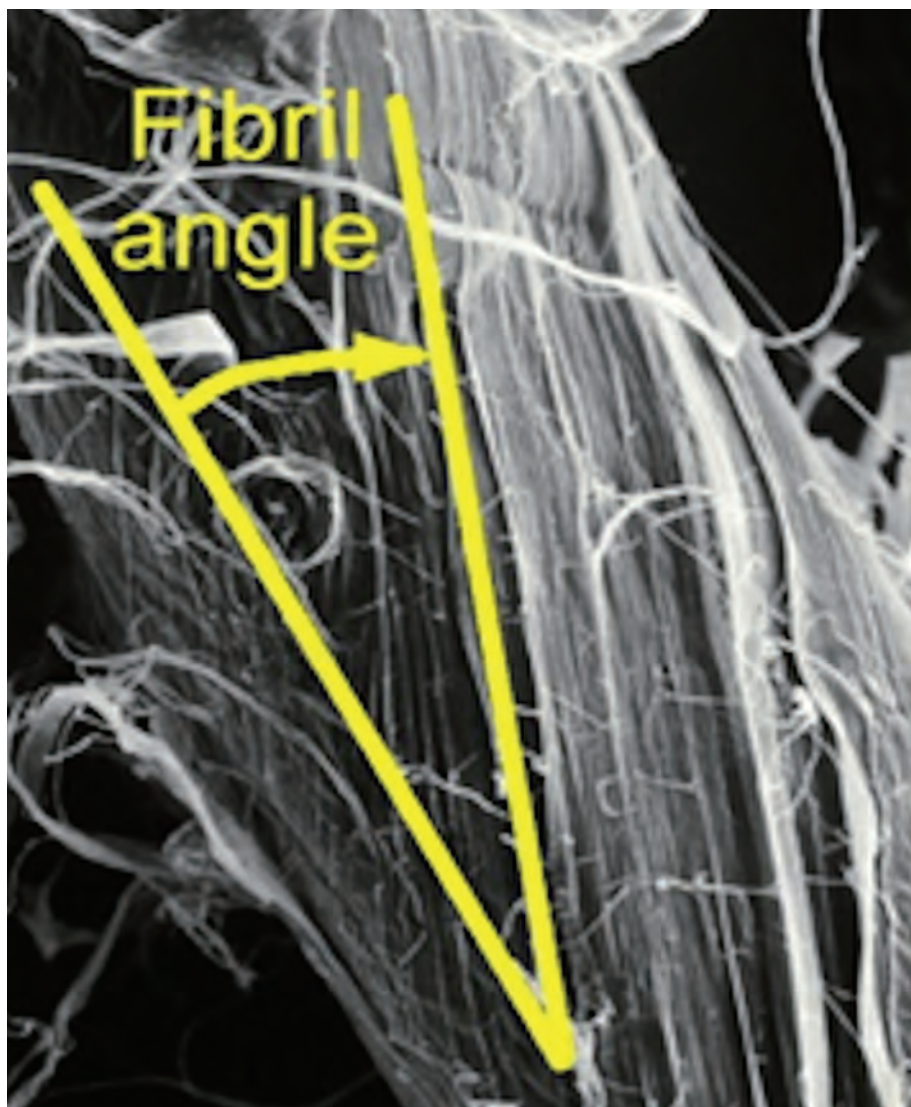
fibres are also advantageous for the structuring of a tissue sheet, whether in the wet-end of the tissue paper machine, or in the embossing process during converting. They also conform easily to the deformation of the tissue sheet.

We regularly collaborate with tissue partners, such as Voith (Tissue Innovation Center), Buckman and others, to exploit the quality of Canfor Pulp NBSK pulp. Through these collaborations, Canfor Pulp contributes to creating premium tissues with the lowest possible basis weight, the highest softness, bulk and absorption while using the latest technologies such as ATMOS, Tissue-Lev and NTT. In mill trials, we obtained quality improvements and were able in several cases to reduce the softwood content with no loss in strength while improving softness and bulk.

The quality of Canfor's NBSK pulps starts with our fibre basket. We harvest naturally growing white spruce, lodgepole pine and, to a lesser extent, sub-alpine fir, grown in the central interior of British Columbia. Our trees are well over 100 years of age when harvested. The central core of the tree is rich in short fibred juvenile wood and is used for lumber production. The outer part of the tree is predominantly long fibred mature wood, is directed to our pulp mills. Mature wood also has a lower fibril angle, which is a major determinant of fibre strength.

With less than 120 frost-free days a year, our trees tend to have very few coarser latewood fibres. Fine fibred pulps tend to bond more effectively with each other, thus forming a stronger sheet. These are some of the reasons why our pulps exhibit superior strength over faster grown softwoods.

Replacing the forest that we harvest is routine. In 2015, we planted over 78 million trees that equates to three seedlings planted for every tree harvested, 95% of which will survive to maturity. The harvested forest is replaced with the same tree species and from the same genetic stock that was harvested to help protect the biodiversity of the natural forests. We are not managing a tree plantation, we are replanting a forest. The forest tenure is large enough that the planted trees will be left to grow for well over 100 years. While the kraft mills in Prince George BC are over 50 years old, they have yet to pulp "second growth" fibre.



Microfibril angle: the angle between the orientation of the cellulose microfibrils in the S2 layer of the cell wall and the longitudinal axis of the fibre. The fibre property has a great influence on pulp strength and other quality attributes.

The inherent fibre quality is preserved during pulping. No one process or piece of equipment can be singled out as the item that preserves strength. Rather, it is a philosophy in which pulp quality is valued in all capital investment decisions and process operations. In order to do this, pulp quality is monitored weekly using a 20cm disk refiner (not a laboratory refiner), so that customers have relevant information for the refining of our pulps in their mills. The weekly testing of our four kraft lines ensures that we have timely information on our pulp quality.

The philosophy of quality is epitomised in the Mihari project, which uses state-of-the-art technologies to monitor pulp quality. The Pulp Quality Vision (PQV) system uses an arrangement of higher resolution cameras to monitor each and every bale of NBSK that we produce for dirt and shives. This

information is provided in real time so that the mills can identify situations that need attention. Since installation and operation, our "off-spec" volumes due to dirt have dropped significantly. Another platform of the Mihari project is the PulpEye, a Swedish technology that provides real time measurements of freeness, brightness and fibre properties (fibre length, fibre width, fines, kink, curl), fibre wall thickness and microfibril angle. The last two are unique to Canfor and significantly improve the precision of our strength models. These pulp properties, which can be measured within 15 minutes using the PulpEye platform, are used to accurately estimate pulp quality so that we can ensure the highest standard.

This article was written by Paul Bicho, manager, innovation and optimisation, Canfor Pulp Innovation

The Millennial consumer: converting brand agnostics into brand believers

Global retail today is a more competitive, complex business than ever before for retailers and brands of all sizes. US retailers, in particular, are struggling to compete in an economy that depends more on consumer spending than other developed nations – a whopping 68% of the GDP.

Retailers have known that they'd have to change to accommodate online competition and savvier shoppers, but most had little idea about the seismic change that lay ahead in response to the largest consumer generation to hit the shopping aisles – Millennials. Millennials are projected to surpass every other generation in spending power by 2017.

According to Goldman Sachs' "Millennials Coming of Age," 2014 report, Millennials outnumber Boomers by 20% and Gen X by 50%. Considering they have less brand loyalty and new definitions for what value means to them, this can be a disconcerting statistic, particularly in a once commodity-focused category like household paper. However, this is good news for private brand household paper products because Millennials understand the value proposition.

Millennials outnumber Boomers by 20% and Gen X by 50%. Considering they have less brand loyalty and new definitions for what value means to them, this can be a disconcerting statistic.

With these new consumers reimagining what it means to shop, where and when they choose to do it and why they stay loyal, retailers must reinvent themselves to provide more relevant, authentic and inspiring product solutions that can differentiate in meaningful ways. For household paper, offering a range of tiers, including an eco-friendly option, a robust digital campaign and ease of home delivery for large sizes are key components to satisfy Millennial consumers.

Evolved consumer expectations has changed the game, and the opportunities for retailers to leverage their private brands in this personal category are impressive. We encourage our customers to build private brand strategies around global retail trends that are shaping consumer shopping behaviors and product loyalty, including those of fickle, digitally-engaged Millennials.

Understanding Millennial Shoppers

More than other shoppers, Millennials are looking for products that fit into their lifestyles. They devour product information and have an outsized need to be served, whether through enhanced personal support or through tech-enabled DIY customer service. With more retailers than ever competing for shopper loyalty, customer service elevated to the level of personal coaching can make the difference in where Millennials choose to shop.

We know that Millennials are seeking a more personal relationship with the retailers they choose, including:



- Communicating easily with retailers and brands, preferably via mobile devices
- Receiving personalised messages and offers, and trading more personal information to get more rewards
- Learning and sharing with "people like me" and these referrals, ratings, recipes and other conversations turn shopping into a valuable relationship
- Being authentically-engaged on a regular basis by keeping conversations



Millennials are big believers in protecting the environment. Many retailers are responding by launching "green" programmes that include paper products

open, honest and responding quickly to inquiries.

Other Millennial attributes are noteworthy, too. Millennials over-index for shopping at convenience stores. Retailers and brands must do anything possible to close the gap, including offering product solutions that save Millennials time and effort.

A final characteristic is a seemingly endless need for change. Products, packaging, a brand proposition or retail environment that doesn't offer new, inspirational choices has an elevated risk of being replaced. An ancillary use for a product, limited-time offers or product customization options matter, particularly to Millennials, along with multi-faceted message about products, processes, values (a retail or brand lifestyle) and about customers themselves.

Opportunities for Household Paper

Messaging is the new marketing – giving Millennials something to talk about and continuing the conversation. Data, tools and technology are making it possible to understand customer preferences and deliver personalised offerings, in addition to product selection and prices. In retail, it's clear that those who make an effort to understand their customers, and offer authentic experiences to the best of their abilities are rewarded with increased sales and more frequent store visits. This points to the idea that consumers value quality products and interesting experiences above the cheapest possible option. However, speed and instant availability is going to become increasingly important as many retailers invest significant resources in offering the most convenient shopping experiences with the least possible friction.

What does all this mean for household paper? With its high penetration, this category is important to all retailers. With paper in the basket, the basket size doubles. Creating a destination for innovative, on-trend household paper products will grow overall sales for the retailer. Here's a few important category considerations:

- Private brand household paper product sales are growing (5%) while national brands remain flat. Millennials are motivated by convenience and index high for C-store purchases.

Consider offering a private brand solution or expand existing offerings.

- People are buying larger sizes to stock up on frequently used products and are moving away from fill-in shopping trips.
- Everyone buys paper – Bath Tissue is 50% of category; Paper Towels are 30% and both these segments are growing. Napkins and facial tissue are declining as more consumers – particularly Millennials – use bath for facial and towel for napkins.
- Household paper is a staple reason for online purchases, particularly for consumers striving to find the best prices and ease of delivery.
- Health & Wellness is a platform for household paper with additives such as aloe, cold/cough-focused products, antibacterial, etc.
- Millennials are big believers in protecting the environment. Many retailers are responding by launching "green" programmes that include paper products.
- Convenience is also a major trend driving household paper product innovation, such as on-the-go containers in the car for facial tissue and napkins. Soft packs are also growing as they can be easily stored in diaper bags, brief cases, etc.

All these trends intersect in the ability to deliver unique, personalized customer experiences, yet for the growing Millennial population, it all boils down to effective messaging delivery. Whether you're a national or private brand, social media is how their community interacts, and where they prefer to get product information, ratings and referrals, making it particularly important to execute a strategic digital media programme to convey brand messages in ways that resonate. Keep two-way communication frequent and authentic by responding quickly to comments and concerns, and ask them to tell you what they're looking for in household paper.

Millennials like a good bargain but only if it's easy to execute, so retailer loyalty programmes must be compelling and digitally executed with mobile couponing and online messaging for maximum impact.

Other Industry Influences on Household Paper:

Consolidation drives competition and private brand growth. Keeping pace with your consumer and meeting their needs with innovation is key. With the growth of the Hispanic population, lavender scented bath tissue is on the rise. Understanding your shopper and tailoring to their needs in regard to pack sizes is very important in this category. As more and more shoppers are buying larger sizes. To illustrate this point, Costco Kirkland bath tissue is their number one SKU, reaping \$500M per year.

The good news regarding the influx of discounter competition is that they do a great job of representing their private brands. National brand household paper is flat but private brand is growing at about five percent. In fact, 30% of all household paper sold in the US today is private brand. As consumers shift to making the discounter their primary store, this equates to even greater growth for private brand products and their manufacturers.

The single greatest gain for household paper is with the current technological advances is the ease of home delivery. For the paper category that speaks loudly to the consumer demand for convenience. Given a variety of options, shoppers who buy in bulk, which a large proportion of them do, can opt for home delivery eliminating the need to deal with large, bulky packages that dominate the cart, block your view in the car and make unloading at home a tough job.

Retailers who focus on providing the best customer experience possible and deliver relevant, trend-minded solutions for their consumers will win the day with long-term shopper loyalty, even with fickle Millennials. Keeping pace with changing digital innovation is paramount to the consumer macro trend of convenience. With consumers shopping multiple channels to satisfy their needs, they'll be loyal to the ones who create the best experience for them. Keeping in mind the changing landscape due to consolidation, discounter competition and online click and collect models, retailers can leverage a differentiated value proposition to meaningfully connect with shoppers of all ages and make the cash register ring.

WEPA Group: Consolidated growth for Europe's third largest tissue player

With paper machines recently started-up in Germany and France, and another PM investment announced in Poland, WEPA Group has its eyes firmly fixed on growth. TWM discusses market strategy with the company's management board member, Hendrik Otto.

WEPA Group has recently hit the headlines with a string of impressive paper machine developments.

All supplied by Toscotec, the company's Giershagen mill in Germany boosted its capacity to produce high-quality super-soft toilet tissue by 32,000tpy with the start-up of an AHEAD-2.0S tissue machine in October 2015. The French, Lille-based site started production on its AHEAD-2.0 crescent former tissue machine in August 2015, producing high quality tissue products and increasing capacity by 35,000tpy. And WEPA announced it had invested in an AHEAD-2.0S line for its Piechowice, Poland-based site which will start production of high-quality super-soft toilet tissue in the first quarter of 2017, boosting capacity by 32,000tpy. Hendrik Otto,

member of the management board, WEPA Group, talks to TWM.

TWM/1: Why you have made these investments?

Otto: "In 2013, we analysed our mid-term demand for semi-finished products. After that, we decided to invest in a quasi-simultaneous construction of three nearly identical tissue machines.

T

Helen Morris

Editor,

Tissue World magazine

Additionally, we are optimising logistic flows within our plants in Europe. The three systems are optimised in terms of energy efficiency and contribute to reducing our CO2 emissions as well as improving the environmental footprint of the WEPA Group."

"Hygiene papers have become a natural part of our everyday lives. Who wants to give up hankies and kitchen towels or even toilet paper? We are convinced, and appropriate studies confirm this, that people's hygiene awareness will continue to develop in the future."

Hendrik Otto



Today, the WEPA Group has production capacity of more than 720,000tpy following the two new Toscotec start-ups

TWM/2: What tissue market trends are you seeing that have led you to make these investments?

Otto: "We have been seeing a trend towards more and more private label products on the retailers' shelves for years. The consumer has detected that private label and premium products are not a contradiction. From the quality perspective, private label products are not different from branded products, but consumers have a price advantage."

TWM/3: Why are you seeing these trends in particular?

Otto: "Hygiene papers have become a natural part of our everyday lives. Who wants to give up hankies and kitchen towels or even toilet paper? We are convinced, and appropriate studies confirm this, that people's hygiene awareness will continue to develop in the future. A corresponding growing demand for tissue is connected and, depending on the individual economic situation, will be satisfied by different paper qualities. Accordingly, the variety of products increases even in the private label sector."

TWM/4: Are you looking to grow/invest further?

Otto: "Our aim is to supply customers optimally across Europe. For this, we are constantly investing in the expansion and development of our existing locations in Germany, France, Italy and Poland. Thereby, we can particularly optimise our logistic costs and guarantee the required flexibility in deliveries to our customers. Further investments in paper manufacturing and converting facilities will be examined comprehensively and, if necessary, implemented to maintain our state-of-the-art plants and operate as efficient as possible. In March, we also laid the first stone for a new tissue paper machine at our location in Piechowice in Poland. Just like the two machines delivered in 2015, this one will be supplied by our long-standing supplier Toscotec. In its configuration the machine is similar to the machines in Lille and Marsberg and is expected for start-up in the first quarter of 2017."

TWM/5: How important is product innovation and environmental sustainability?

Otto: "As a family-run company, sustainability is not just limited to the ecological side. We have been active on the market since 1948 and have grown gradually since then. Today we are the third largest tissue manufacturer in Europe and keep the balance, both in economic and in environmental terms. For us this means on the one hand to produce and offer market-oriented products at reasonable prices. This includes the use of sustainable raw materials such as certified pulp and waste paper and the continuous optimisation of energy and water consumption as well as efficient manufacturing and logistics processes. On the other hand, we intend to keep the family company running in the long term and adjust ourselves to future requirements. Customer relationship, financing, investments, human resources development ... these are areas we also see in terms of sustainability."



"We intend to keep the family company running in the long term and adjust ourselves to future requirements. Customer relationship, financing, investments, human resources development .. these are areas we also see in terms of sustainability."

Hendrik Otto

TWM/6: What are the main opportunities for WEPA over the next five years?

Otto: "We are convinced that the demand for tissue products in Europe will generally grow in the next years. Reasons for this are the rising living standards, urbanisation and especially the growing hygiene awareness among consumers. This growth is generated disproportionately in Eastern Europe and in the Away-from-Home sector. WEPA Group aims to participate in this growth throughout Europe."

TWM/7: What are the main challenges?

Otto: "Predictable prices and availability of raw materials can be partially achieved by a foresighted planning and long-term contracts with suppliers. In order to further invest in efficiency and flexibility in the capital-intensive paper sector, it is also important to ensure delivery volumes and income. We achieve this by good customer relations, a high service level and customer-specific, innovative products. Another main sector will be the energy situation. We especially pay attention to the topic of energy efficiency in continuous improvement and special projects. Here we still see potential for savings that we can generate in cooperation with the machinery suppliers."

Headwinds in the Russian tissue market

Russian tissue consumption showed a very strong growth pattern from 2000 until 2012, with an average growth rate of close to 10% per year. But since 2012, many things have changed, and in 2015 the economy fell into a deep recession.

E

Esko Uutela

*Principal,
Tissue, RISI*

Plummetering oil prices, international sanctions due to the annexation of Crimea and capital flight have reduced investment, domestic consumption and imports. The large depreciation of the ruble has pushed inflation to double digits and reduced real incomes, especially of the poorest. This situation has changed buying habits of the middle class and negatively influenced the tissue business.

Tissue consumption grew by 11.1% in 2012, and then more slowly by 6.6% in 2013 and 5.0% in 2014. By international comparison these growth rates are still respectable, but the 2014 growth was less than half of the long-term growth rate seen only two years before. In 2015 Russia's economy contracted by at least 4%; the final figure is not yet available. Our preliminary figure for growth in tissue consumption for 2015 is 3.2%, still on the positive side despite the poor economy.

Slower tissue consumption growth is not the only consequence from the Russian political and economic developments. Russia used to import significant amounts of tissue from other European countries, but new domestic capacity and a substantial devaluation of the Russian currency has curbed imports, particularly from EU countries such as Finland (first 11 months of 2015 showed a decline of 73%) and Germany (-46%), as imports from the eurozone countries are now extremely expensive.

Imports from Poland and Ukraine have also declined in the past two years. The conflict between Russia and Ukraine has recently expanded into an economic war with import bans and tariffs for goods by both countries. It is not known to what extent tissue products will be hit by these measures, but most likely the tissue trade between Ukraine and Russia will decline further. In 2015 Ukraine was Russia's main tissue import source, accounting for nearly one-quarter of total imports.

Russian tissue exports have grown recently, mainly to Kazakhstan, Ukraine, Belarus and other former CIS countries. Russian exporters have benefitted from the weak currency and tissue exports have doubled since 2012.

Russian net imports of tissue disappeared totally in 2015, and from the zero trade balance in 2015 Russia may develop into a small net exporter in 2016. New capacity has recently started up in the country, causing some overcapacity and forcing mills to make an effort to increase exports as the domestic market is depressed by the recession.



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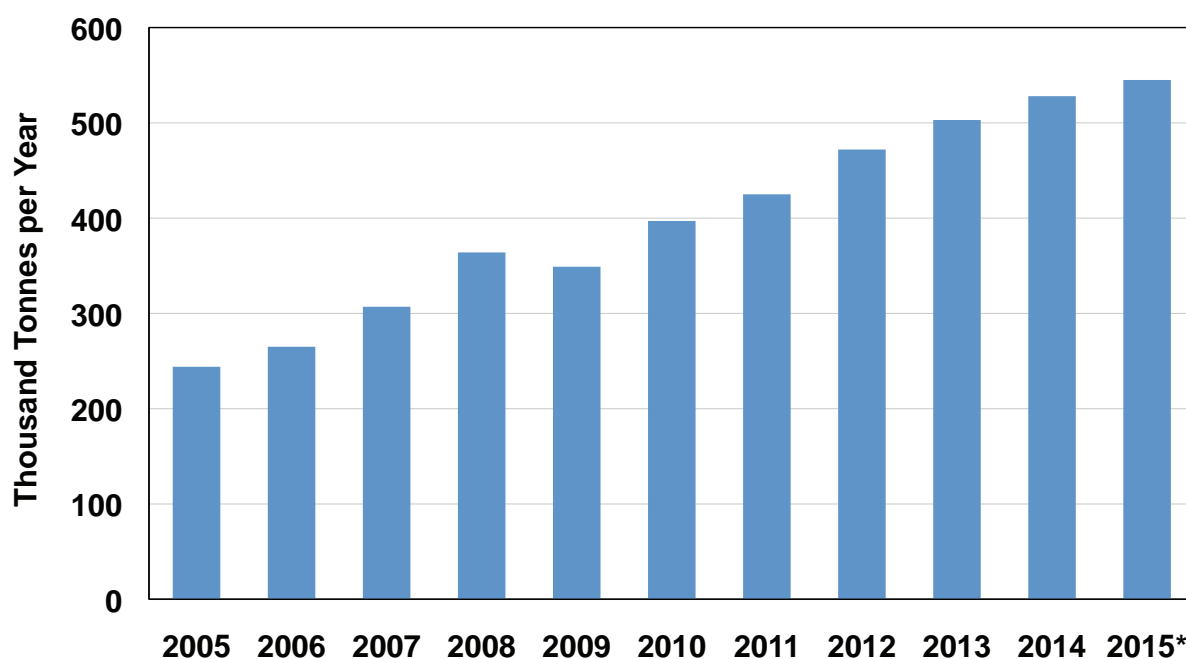
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Figure 1
Tissue Consumption in Russia, 2005-2015



* Preliminary estimate

Large federal and regional chains have a substantially higher private label share than smaller regional retailers, and the traditional kiosk and corner shop businesses have practically no private label participation.

Another influence of the worsened economy and reduced purchasing power has been that the rapid move toward higher quality products that had been ongoing in the Russian tissue market in the past five to ten years has practically stopped, and some consumers have reportedly returned to lower quality products for price reasons.

This development has prolonged the life of non-branded tissue products, which are sold by the length of the roll or as no-name products. It appears that the premium brands have suffered less from downgrading than the second- and third-tier brands. In addition, private label offerings have increased and even smaller chains have wanted to launch their own retailer label, with prices typically at least 15-20% below branded products.

The reports on the true nationwide share are surprisingly different, most probably due to the fact that the coverage of the measurements varies. Large federal and regional chains have a substantially higher private label share than smaller regional retailers, and the traditional kiosk and corner shop businesses have practically no private label participation. Based on various reports, we believe that in 2015 the true share of the total Russian business was still somewhat below 20%, although growth has been rapid in recent years.

Russia has recently attracted quite a few investments in new tissue capacity. The peak of this investment wave was in 2014, with new capacity totalling 160,000 tonnes annually, including STG's new Semibratovo PM and two large PMs from SCA and Hayat Kimya. These projects increased Russian tissue capacity by one-third within a single year!

In addition, the long-delayed Pulp Invest project (27,000 tonnes) in Kazan was completed in 2015 and Syassky is in the process of replacing its PM3 with a net capacity change of about 20,000 tonnes which will be completed later this year. This means that there is now overcapacity in the Russian tissue industry. This may be the reason that the announced large greenfield tissue mill project by Arkhbum Tissue Group is reportedly currently on hold and the smaller project by Wolma/Paper Recycling seems to have been postponed for an indefinite period of time if not totally cancelled.

The current Russian market outlook is characterised by overcapacity and slowing demand growth, but in the longer term, Russia, with its low per capita consumption (less than 4 kg), will continue to offer potential for tissue producers. Reportedly some new investments are planned by the main players, but the current economic situation may delay them.

For new players, such as Hayat Kimya and Pulp Invest, entry into the Russian tissue market has been and will continue to be challenging.

Events Calendar

Event	Date	Location	Website
ISSA/INTERCLEAN Amsterdam	May 10 - 13, 2016	Amsterdam, Netherlands	www.issainterclean.com/
PaperCon 2016	May 15-18, 2016	Ohio, USA	www.papercon.org
Asian Paper 2016 Bangkok	June 1 - 3, 2016	Bangkok, Thailand	www.asianpapershow.com/
ZELLCHEMING-Expo 2016	June 28 - 30, 2016	Frankfurt, Germany	http://www.mesago.de/en/ZEX/
ISSA/INTERCLEAN Istanbul	September 7 - 9, 2016	Istanbul, Turkey	www.tissueworld.com/Istanbul
Labelexpo Americas	September 13 - 15, 2016	Chicago, USA	www.labelexpo-americas.com
Tissue World Istanbul	September 27 - 29, 2016	Istanbul, Turkey	www.tissueworld.com/Istanbul
Labelexpo India	November 17 - 20, 2016	Delhi NCR, India	www.labelexpo-india.com
ISSA/INTERCLEAN Latin America	February 22 - 24, 2017	Mexico City, Mexico	www.issainterclean.com
Tissue World Milan	March 28 - 30, 2017	Milan, Italy	www.tissueworld.com/Milan
ISSA/INTERCLEAN CEE	April 26 - 28, 2017	Warsaw, Poland	www.issainterclean.com
Tissue World São Paulo	May 31 - June 2, 2017	São Paulo, Brazil	www.tissueworld.com/SaoPaulo
Tissue World Miami	March 21 - 23, 2018	Florida, USA	www.tissueworld.com/miami



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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
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