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MARCH/APRIL 2015

The independent news provider for the global tissue business

TWM
TISSUE WORLD MAGAZINE

InterneTISSUE

Click and collect – small now but is it the big future for French (and all) consumers?

Country Report

France sees shoppers ignoring economic woes

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Plus: Changes at the top at SCA

Special Feature: Pöyry on saving money as distribution costs rise

Technical Theme: Converters on a surge

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TISSUE WORLD MAGAZINE

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Cover: PURPLEPRINT Creative

By Tissue World magazine editor **Helen Morris**

French market shows evolving tissue trends are helping to buck a gloomy European marketplace

As a Francophile it doesn't surprise me in the least that French shoppers are bucking the trend, in more ways than one. The standard model economic theory has it that when times are gloomy consumers trade down, but in France we see that the opposite has happened. SCA's premium brand Moltonel has, for example, fared better than the mid-priced Lotus.

And at the point of sale, creative retailers have come up with a new way of doing things which savvy shoppers obviously fancy: select your tissue product on the internet and collect your bulk purchase at drive-through superstores. French design excellence on show.

TWM's brilliant cover shows how bulk-bought tissue can grace a room. And while the retail channel's value share is still fairly small - jumping from 3% in 2012 to 4-5% in 2014 – over the last couple of years it has become more and more of a key buying tool for tissue in France.

It will be interesting to see how this trend develops in France and takes off elsewhere.

It's true, times are gloomy, relatively. French exceptionalism has taken a bit of a battering: morale is low, living costs outstripping wages, unemployment high, dissatisfaction with the political elite, economy stagnating, the euro and the EU itself – an enterprise of much pride for this founding partner – struggling.

Of course 2014 was the year of the discount. Giant promotions on huge family packs of toilet paper and bumper kitchen towels paradoxically enabling consumers to make the trade up to premium products.

The result: retail tissue saw 2% volume and value growth to reach €1,754m.

The private label/brands battle is intense: private label supreme in retail tissue at 61% value share; branded players chipping away at that edifice but at a cost of reduced margins; private label countering by producing more premium products with little immediate effect.

That market cannot be sustained for the longer term and a rebalancing must follow. This and the next year will be testing. Price discounting has to come to an end at some point. Manufacturers need the economy to come to the rescue, and the sooner the better.

Helen Morris

Editor, Tissue World magazine

Tissue World Barcelona 2015

TWM would like to offer a very warm welcome to all those in Barcelona for Tissue World 2015! We take great pride in bringing you a show floor full of the industry's key movers and shakers as well as a conference programme that keeps you informed and offers you a wide variety of talks to help you forecast for the years ahead.

Above all, we bring you Tissue World 2015 to help you meet the people that are going to be key to your business and its technologies over the coming years. We would like to thank you and the wonderful city of Barcelona for your support.

For those of you who can't attend, TWM will be producing bulletins during the show and will also give coverage of a handful of the key talks in the May/June issue of the magazine.

We also say goodbye to Barcelona this March as we move to the heart of the tissue industry for Tissue World 2017 - held in the glorious Italian city of Milan.

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TISSUE WORLD is published bi-monthly. The subscription price is US$400 per year for 6 issues. Subscription is free for qualified subscribers in the tissue industry.

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Subscription online at www.tissueworldmagazine.com

In Tissue World all measures are metric and all dollars ($) are US dollars, unless otherwise stated.

By freelance journalist **Simon Creasey**

As shopping habits change SCA's Barker sees multiple, price-relevant and distinctive products as the key

Sally Barker has a vision. And that vision is to drive a sustainable business for long-term growth. It's a vision she's been working towards ever since she joined SCA in 1990 as a junior marketing manager.

Today, Barker is managing director of the company's UK and Ireland operation – a post she took on in 2009 – and despite recognising that the tissue industry faces some major challenges over the coming months, she's in a bullish mood.

That's partly because she foresees strong future growth for the company's products in places like China and Russia where tissue markets are growing rapidly. But also because she thinks there are still opportunities for SCA in the UK, despite that it's a mature market and therefore the opportunities to grow it are much more limited.

Barker is the first to admit that over the last 12 months or so the UK tissue market has endured a tough time, with the total consumer tissue category, which is worth circa £1.757bn in value sales per annum, in slight decline.

But there is still plenty of room for optimism on a category-wide level, says Barker. "Toilet tissue makes up the majority of this market with a retail sales value of £1.164bn and following a period of decline over the latest 52 weeks, roll price inflation has started to slow the value decline," she explains.

"And the household towel category, which is worth £359m, is holding value year-on-year as shoppers' trade up to medium and large pack sizes. Penetration remains stable at 82% so pack size trade up is the main driver of this growth."

On a brand level the picture looks even rosier. "At SCA our brands are performing well," says Barker. "Plenty is the UK's number one brand of household towel and Velvet is the fastest growing toilet tissue brand, with Cushelle also developing and driving value."

Given the depth of the recent economic downturn, SCA's flagship brands appear to have weathered the storm better than some of its rivals, but Barker admits that the company wasn't immune from the fallout.

"The economic crisis and the slow recovery from recession resulted in a change in the way people shop with a focus on value and shoppers visiting a number of retail outlets to follow the bargains," says Barker.

"Figures from IGD Shopper Vista show that people have also focused in on the essentials. In 2007, just before the financial crisis, households allocated an average of 19% of their budget to necessities. In 2012, the last year of the crisis, this had risen to 22%. And this reflects the fact that people had less money to spend. In terms of buying power, household budgets shrank between 2007 and 2012 by 10.7% and this was broadly true across the income range."

Although the UK might finally have

Simon Creasey

Freelance journalist

The approach is to "grow the whole category, brand and own brand": SCA's Barker

By freelance journalist **Simon Creasey**

emerged from the recession and put itself back on a more stable financial footing, Barker says that some of the changes in shopper behaviour that were caused by the economic downturn, still remain today.

"IGD figures show that last year nearly half (47%) of all shoppers say they've been to two or more stores on the same shopping trip to buy their food and groceries – this is a rise from 42% last year," says Barker. "Promotions are also increasingly important. Nearly three in 10 (27%) shoppers say they've purchased products on promotion in the last month in order to stock up and store them at home."

One of the key reasons behind the fall in store loyalty and the increasing use of promotions – particularly by the large UK supermarket groups – as a sales driver, is the continued rise of discounters like Aldi and Lidl. Both companies continue to report strong sales growth in the UK and both have ambitious future store expansion plans, along with fellow discounter Netto, which announced last year that it was returning to the UK retail scene through a joint venture partnership with Sainsbury's – the German discount chain sold its UK stores to Asda in 2010.

Although the discounters clearly represent a significant threat to some of the UK supermarket groups, Barker is confident that SCA's business strategy can help all of its retail partners.

"As some shoppers have re-appraised the way they purchase different categories, including our own, since the recession, we as manufacturers need to ensure that our product portfolios also match the ever-changing needs of the consumer," says Barker. "Therefore we have a multiple brand portfolio that services the needs of all consumers and gives them the right value tissue product they require for their needs wherever they choose to shop."

That also includes the provision of own label products, which SCA supplies to some of its retail partners. While some manufacturers eschew this opportunity for fear of damaging sales of their own products Barker says the company's approach is to "grow the whole category, brand and own brand, as ultimately we will all benefit".

However, for SCA's own products to thrive she recognises that they need to "stay relevant to the consumer and

SCA's Managing Director, UK and ROI Sally Barker

Name: Sally Barker

Job title: Managing director, SCA, UK and ROI

Brief career history: "I've never had a life plan on how to get to where I am today. Instead I believe in doing what I enjoy as, if you enjoy what you do, then you put everything into it. Before I came to SCA I worked at Mars for 10 years in various roles and joined SCA in 1990 as a junior marketing manager. Over the 24 years that I have been here I have been able to progress through many marketing and sales positions during my career into my current leadership role."

What's your business motto? "I don't know if you'd call it a motto – it's more of a vision, and that vision is of driving a sustainable business for long term growth. This benefits both SCA and customers as it drives good business for the long term and also gives security to our employees."

What do you most enjoy about your job? "The thing I enjoy most is bringing people into the business and seeing them grow into their role and develop skills to help them take on more and more responsibility. I find that if you encourage your colleagues and trust in their abilities, they reward you by showing commitment and passion for their work."

What do you least enjoy about your job? "I don't really have anything I enjoy the least – everything about this job is challenging and I relish a challenge."

What's the best decision you've ever made? "It sounds cheesy, but the decision to join SCA was one of the best I've ever made. It gave me the opportunity to develop my skills and work in a job that I find rewarding and challenging."

What's the hardest decision you've ever made? "The hardest decisions are always the big ones. And the way to make the hard decisions easier is to make sure you have a clear strategy and direction. That way you can dissect the problem and examine each aspect of it against your strategy. The key is to ensure that your decision supports your ultimate objective. If the decision is still proving intractable, then I will usually sleep on it. It is important not to be hurried into a 'knee-jerk' reaction, but instead to take a measured approach."

By freelance journalist **Simon Creasey**

distinct from the competition," which is why the company has worked so hard to build a number of key differentiators into its product range. "For instance, Cushelle toilet tissue and Plenty household tissue use advanced TAD technology to deliver on the key metrics of performance in the paper category. Velvet Quilted benefits from leading edge technology through its 'Nested' make up, with the Comfort range being one of the superior conventional toilet tissues in the category and Velvet also gives consumers an ethical option thanks to its 'three trees promise'," she explains.

As these examples underline, innovation is incredibly important to SCA, with much more new product development (NPD) on the cards in the future, promises a tight-lipped Barker.

"NPD is essential as a driver to growth and we have a lot of new products coming through, but we never reveal NPD before it hits the market," she says.

Another potential growth driver for the company is acquisitions. In 2012, SCA bought Georgia-Pacific's (GP) European tissue business for a reported €1.32bn, and although SCA subsequently sold some of GP's brands to Sofidel in 2013 to comply with EU competition rules, Barker says that the acquisition provided a good strategic fit that "further strengthened our product offering, with well-known brands and geographic reach in Europe".

Going forward she readily concedes that the company expects most of its

For SCA's own products to thrive, Barker recognises they need to "stay relevant to the consumer and distinct from the competition."

future growth will occur in emerging markets – some in Europe, some further afield.

That said "SCA plans to continue on its current path of profitable growth in both mature and emerging markets," says Barker. "Our long-term goal is to hold a leading position in each of our product segments in all markets in which we operate."

She also acknowledges that this ambition isn't without its challenges, one of the biggest of which is "locating the shopper". "The average shopper now uses 3.9 channels per month, including the major multiples, online, discounters and convenience," she explains. That's why the company continues to support its sales through a number of different routes. "These include bespoke promotional activity tailored to focus on the products and promotional mechanics that resonate most with convenience shoppers," says Barker. "Driving visibility of our branded activity guarantees that shoppers have easy access to the brands that they love and drives category value and profit for the retailer. We also have on-going multi-million pound marketing campaigns to continue to drive brand and category growth."

It's this joined up strategic approach, coupled with SCA's portfolio of high quality, instantly recognisable household brands, that gives Barker the utmost confidence that her vision of driving a sustainable business for long-term growth is well within her grasp.

Simon Creasey is a freelance journalist and regularly contributes to The Grocer, the UK's only paid-for online service and weekly magazine covering the whole FMCG sector.

'New Product Development is essential as a driver to growth'

GLOBAL

SCA's Jan Johansson steps down following on-going aviation and hospitality audits

SCA has said its president and CEO Jan Johansson has stepped down.
The company has been in the spotlight over media allegations that include extravagant corporate perks including the use of private jets.
It is not yet known how many jobs the on-going audits have or will claim.
A report in the UK's Guardian newspaper said Johansson resigned on 10 February after coming under increasing pressure after allegations that wives, children and even pets of board members had travelled on corporate jets.
SCA's chairman of the board, Sverker Martin-Löf, will also resign; it is understood he is stepping down one year early following the media scrutiny related to his alleged use of the private jets and hunting trips.
A spokesman for SCA told TWM: "SCA's board of directors has initiated special audits of the use of business aviation and corporate hospitality to be conducted by the company's appointed auditors as well as independents.
"SCA has in addition already now changed its policy in respect of spouses and relatives accompanying on business aviation travel.
"Even where there is no extra cost to the company or if they pay for the travel themselves – which was the case in the previous policy, they are now not allowed to accompany in the business aviation under the new policy. And business aviation is not to be used for corporate hospitality."
He added that the on-going audits have not yet presented any reports.
In a statement Johansson said: "The last months I have spent a large part of my time on the on-going audits related to SCA.
"A preliminary investigation has also started, which means that the ability to focus on the business has been further reduced."
In the statement, SCA said: "The board regrets, but understands and respects that Jan Johansson cannot effectively lead SCA under the current conditions.
"The board would like to emphasise that there is no new information related to the on-going audits. The board has continued great confidence in Jan Johansson."
The company was unable to comment further at this time.

President and CEO Johansson: "Ability to focus on the business has been further reduced."

'SCA's board of directors has initiated special audits of the use of business aviation and corporate hospitality'

Record profits

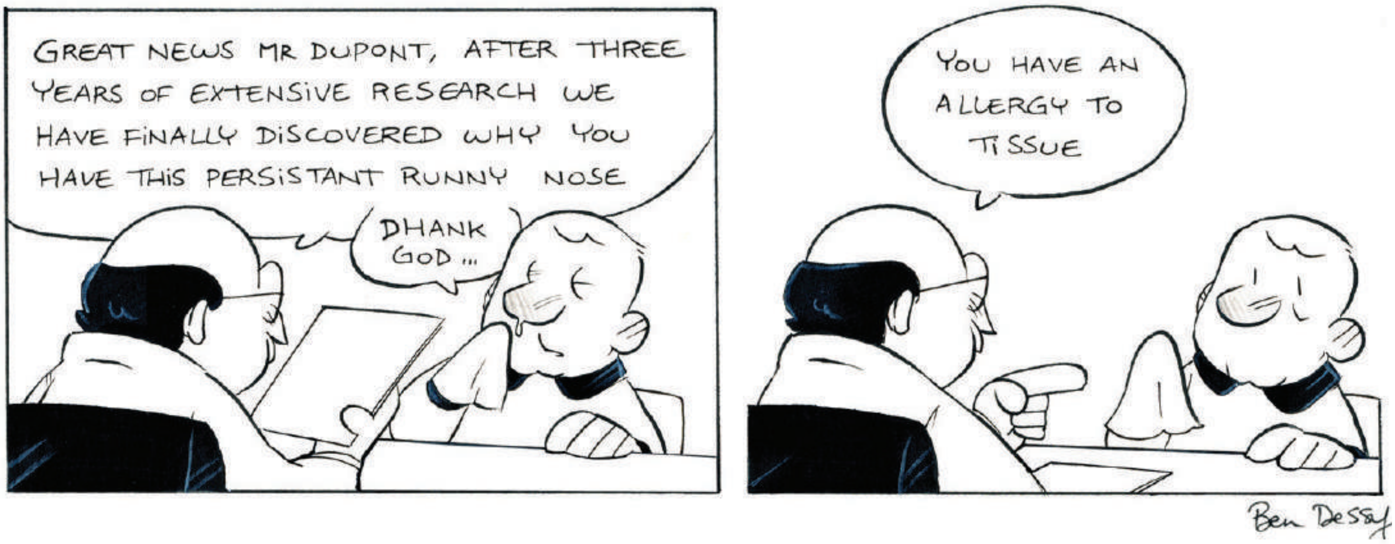
SCA reported record profits in January 2015, with the group delivering its highest pre-tax profit ever, up 17% to SEK 10,888m year on year. Net sales rose 12% to SEK 104,054m.
Tissue posted a considerably higher operating profit for the fourth quarter of 2014 compared with the same period a year ago at 17% to SEK 1,867m, while sales growth increased 24%.
SCA has also significantly boosted its presence in Asia after it transferred its hygiene operations in China, Hong Kong and Macau to Vinda.
It also strengthening its geographical reach in Europe after it completed the acquisition of Georgia-Pacific´s European tissue business in 2012.

Magnus Groth replaces Johansson

SCA's president of the company's European consumer goods unit Magnus Groth has replaced Johansson as president and chief executive as of 1 March.
Groth has worked at SCA since 2011 and he has extensive experience among other things as CEO of the listed company Studsvik.

SCA executive vice president Mats Berencreutz retires

SCA has also announced its executive vice president Mats Berencreutz has retired on 1 March.
He leaves the group management and SCA.
The SCA spokesman confirmed Berencreutz's retiring was not linked to the on-going audits and that he was simply retiring.



TWM cartoon | **March/April 2015**

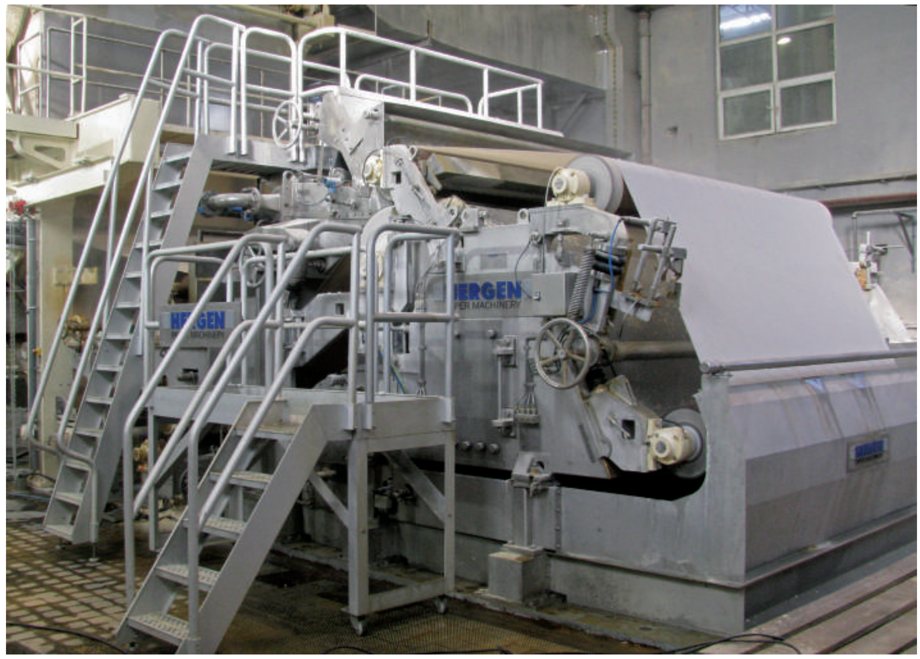
Gambini boosts global presence with AMS joint agreement

Gambini has increased its global presence after it announced a joint collaboration with Vancouver-based Applied Motion Systems (AMS).
The agreement will provide tissue converting technology and engineering services to the North American marketplace.
Bart Drage, managing director of Gambini America, said: "This strategic agreement will allow us to enhance our technical service support in North America.
"AMS has been active in the tissue converting industry and brings to us experienced technical resources which will also allow us to maximise the performance of our North American electrical platforms."
Paul Johnson, AMS chief operating officer, said: "This collaboration allows us to further help customers increase production throughput and flexibility when upgrading a converting line.
"Our customers can strategically integrate new Gambini machine sections into their existing production line to address their specific needs and budget."
Gambini is headquartered in Lucca, Italy, and specialises in the manufacture of tissue converting machinery for the consumer retail market for the production of bathroom tissue and kitchen towel products, and for the AfH commercial and industrial roll markets.
AMS is an applied technology company that specialises in high-performance coordinated drive and control systems across a range of industries.

An open house featuring Gambini's SmartCut Core Maker will be held at AMS's Vancouver facility from March to May

Petri Helsky appointed CEO of Metsä Tissue

Metsä Tissue has appointed Petri Helsky as CEO of Metsä Tissue Corporation.
Helsky will start his new position as well as becoming a member of Metsä Group's Executive management team no later than 1 July 2015.
He has held different management positions in Kemira Oyj since 2007, the latest being president of the paper segment and president of the Asia-Pacific region and member of Kemira Management Board.



GZP signs up Hergen to rebuild its Niedomice mill's PM1 into a Crescent Former

POLAND

Almus boosts converting capacity

Poland's Almus has boosted its converting capacity after it signed for a Gambini Touchmax line.
The family-run company is based in Slomniki and produces Almusso products, consumer and AfH products as well as private label tissue.
It has four Gambini converting lines including the N.4 Model Dynamic 550 line, which will be used to produce consumer products.
Due to the investment, Almus will offer products with the highest quality that also have cosmetic advantages.
The new line allows the company to produce rolls without tissue stretching in order to obtain high quality products without losing their original properties.
Gambini added that another advantage of the line is the lotioning, which means the machine can produce rolls with the best hygienic and cosmetic properties.
The line will also produce different patterns of each roll of kitchen towel, and consumers will never find two patterns the same.
Almus also has plans to buy another converting line for AfH products in 2015.

Almus's TouchMax line will produce rolls with high hygienic and cosmetic properties

GZP boosts capacity

Głuchołaskie Zakłady Papiernicze (GZP) has boosted its capacity after it signed up Hergen to supply a Smart Fit Crescent Former.
The Polish company produces a variety of tissue products across five machines located in two paper mills.
Its Niedomice mill's PM1 will be rebuilt into a crescent former and Hergen's scope of supply included approach flow engineering, Crescent Former HCF 920 Smart Fit, felt section, suction and blind drill press section, Yankee dryer columns, pope reel, a set of spare rolls, package of engineering and start up services.
The machine produces tissue with basis weight since 11g/m2 up to 28 g/m2 on the reel with excellent formation and mechanical properties.
Operating speed is 1,200m/min it designed to achieve capacity up to 80tpd.
GZP offers a full range of tissue products, including private labels.
The investment is part of a development plan to improve its products and energy savings.

'Almus also has plans to buy another converting line for AfH products in 2015'

USA

Cascades PM ramp-up continues at St. Helens; machine rolls being sold

Cascades started up a converted uncoated freesheet (UFS) paper machine for making tissue paper in late October, a company official said.
PM2 is a "wet crepe tissue machine which will produce 55,000tpy of napkin and towelling grades for the AfH market," the official said.
"We are very pleased with the quality and productivity on H2. We are already selling rolls and the initial customer feedback has been very good," the official said on 20 November. "The ramp up will continue in the next months."
Boise Paper used to make UFS paper on the H2.
The Cascades conversion is the second one in two years in the USA where tissue producers converted a former UFS machine.
ST Paper last year started making tissue on a converted UFS machine at International Paper's Franklin, VA, mill.

News from RISI (www.risiinfo.com)

Clearwater Paper sells specialty mills to Dunn Paper

Clearwater Paper Corporation has sold its specialty products business and mills to Dunn Paper and said it will reinvest the net proceeds of the sale within its consumer products division.
The transaction includes the sale of five Clearwater Paper subsidiaries with facilities located at East Hartford, Conn., Menominee, Mich., Gouverneur (Natural Dam), N.Y., St. Catharines, Ontario, and Wiggins, Miss.
Linda Massman, president and chief executive, said: "The sale of the specialty products business sharpens our consumer products division's focus on the core retail business.
"It's about improving our approach and efficiencies in all parts of our business while meeting or surpassing our customers' expectations, and our company financial goals.
"We believe that the capital projects in which we will invest the proceeds of this sale can yield a 300 to 400 basis point improvement in the consumer product division's EBITDA margins over the next three years."
Some 470 specialty products employees are now employees of Dunn Paper.
Clearwater Paper manufactures quality consumer tissue, away-from-home tissue, hard roll tissue, bleached paperboard and pulp at manufacturing facilities.
The company supplies private label tissue to retailers and wholesale distributors.
Dunn Paper is a leading specialty paper manufacturer and produces a range of specialty waxed, coated and uncoated machine-glazed papers used in various food packaging and specialty label applications.

Jäger expands into the Americas with Jaeger launch

Cylinder services company Jäger has moved into the Americas after it launched its American Yankee Services business.
Based in Vancouver, Washington, Jaeger will offer a full range Yankee services including grinding, thermal spraying, internal condensate systems, doctoring systems and engineered solutions.
Owner Manfred Jäger said that with over 1,000 projects so far, the company was ready to make the move into the Americas.
The company has appointed two Yankee services engineers, operations manager Craig Everson and technical manager John Holton to head up the new division.
Jäger is an independent company that provides Yankee services in Europe and Eurasia.

BRAZIL

Santher raises third quarter revenues by 11% to $130m

Brazilian tissue producer Santher's third quarter revenues hit Real 337 million ($130 million), an 11% increase over the same quarter of 2013.
Through September, the company sold Real 956.7 million, or 10.3% more than a year ago.
Santher said the results were mainly supported by higher average prices and sales of value added products.
The company's July-September 2014 EBITDA increased 36.9% to Real 49 million year-over-year, while net income totalled Real 640,000 compared to a net loss of Real 950,000 a year ago.
"Santher's actions to improve sales, enhance price policies and sales mix, as well as gain operational efficiency and reduce costs, supported a firm evolution in our gross margin and EBITDA margin in 2014," the company said, adding that during this year the value of traded products are also 6.9% higher than 2013.
According to Santher's financial report, the current Brazilian economic scenario is very challenging, with a strong slowdown noted by research institutes and industrial production moving down 2.9% in the first nine months of 2014 over the same period of 2013.
"But besides the economical disadvantages, Santher continues to obtain substantially better results.
"At the end of this period, the company improved its net revenues and EBITDA compared to the same period of last year and for the third quarter in a row obtained a net profit."
On Sept. 30, 2014, Santher's net debt totalled Real 466.9 million. The company's leverage level also moved down from 3.7x last year to 2.9x this September.

News from RISI (www.risiinfo.com)

'Besides the economical disadvantages, Santher continues to obtain substantially better results.'

CZECH REPUBLIC

Papcel finalises acquisition of ABK Groupe

Czech Republic machinery manufacturer Papcel has finalised the acquisition of French paper machine supplier ABK Groupe.
The newly formed group will now supply tissue technology globally.
In a statement the company said: "ABK Groupe has inherited this technology and during the period 2011-2014 was able to supply a number of tissue installations, representing the most modern technology in this field."

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Tissue World moves to Milan after Barcelona

Tissue World has kept its vow to circulate in Europe and in 2017 will move to the dazzling Italian city of Milan!

It follows two events in a fantastic city that graced the tissue industry with its beauty, its impeccable services, and greatly enhanced the industry's reach in the Iberian Peninsula and far beyond.

Tissue World has conducted a survey on where to move after Barcelona and the results indicate Milan as the winner.

Many reasons back the candidature of this city: its proximity to one of the most important markets and industries in the world, its pivotal position within Europe, the easiness to fly to the city, the overall cost of exhibiting and visiting below many other candidate cities, the state of the art venue (MICO) close to downtown Milan, and the vast array of entertainment options available in the city and in the country.

But before we move to Milan, we welcome you to Barcelona for the next edition of Tissue World!

As TWM went to print, the show and conference were looking great and visitor registrations were of a very high quality.

Speakers at the conference include:
Oxford University's Andrea Boltho
Stratfor's Adriano Bosoni
Hawkins Wright's Oliver Lansdell
Kantar Retail's Himanshu Pal
SCA Hygiene Products' Olli Härkönen
Gomà-Camps' Jordi Gomà-Camps Travé
Northwood Tissue (Disley) UK's Rob Mcleod
Plus many more!

To celebrate this special occasion, Tissue World plans to thank you and the city for your wonderful support by organising a splendid farewell... a gala dinner at La Pedrera, one of the symbols of this memorable city.

These are: Brazil's Braswell PM1 at 120tpy and Braswell PM2 at 120tpy, the USA's White Mountain Tissue at 105tpd, Romania's MG Tec PM1 at 85tpd, Turkey's EKA Kagit PM1 at 90tpd, and Mediterranean Tissue PM1 Rebuild from Twin Wire into Crescent former
The group now presents itself as a key supplier for these plants, with a complete range of machines with Crescent Former.
It can also supply complete stock preparation systems for virgin and recycled fibres, finishing systems, and all accessories and auxiliary equipment, as well as basic and detailed engineering, and project management, to supply complete EPC contract to the clients requiring a turn-key approach.
Partner company ERMA Engineering, an engineering firm based in Switzerland and with a subsidiary in the Czech Republic, will engineer and project manage.
Papcel / ABK will also be executed in Asia and this plant will be supplied by Papcel Group.
The scope will go from the raw material storage area to the finished roll exiting from the mill, with the sole exclusion of the civil works.

SLOVAKIA

Slovakia's Bukóza prepares for two new lines of personal care products

Bukóza Invest is taking another step in its entry into the hygiene products business.
The company started production on two lines at its facility in Hencovce in eastern Slovakia in August last year and is now getting ready to start up two more lines in the second half of this year.
The firm currently has a monthly capacity of some 3.5m pieces of sanitary napkins and some 3.4m pieces of incontinence pads.
Chief executive Erik Kadlec said: "This is our start-up capacity and we expect to increase it by 30% after making a few improvements and changes."
The company is preparing to install two more lines which should be up and running in the second half of this year, doubling the firm's capacity.
Both lines should have a monthly capacity of some 3.4m pieces, one producing ultrathin napkins and other pantyliners.
Last summer, Bukóza Invest announced that it would use some 20,000tpy of pulp from Bukocel's nearby bleached hardwood kraft pulp mill to make products with higher added value, such as personal care products as well as powdered cellulose.
This would create 700 new jobs and the products should generate sales of some Euro 116 million.
However, to reach that level of new jobs, state support is needed, Kadlec said, adding that without support, the company can only create 150-200 new jobs.
The total investment would be some Euro 21.5m. Previously, the company was applying for Euro 10.75m in support for the project from the Slovak government, but this has been reduced to Euro 7.2m following new rules for state support.
There have been some delays on the funding side, however. "The proposal was sent back from the government in order to verify certain points.
"We provided the required data and the project proposal has been sent back to

the government for approval," Kadlec said, adding that the company is now waiting for the government's decision.

News from RISI (www.risiinfo.com)

JAPAN

Tokushu Tokai tests new tissue machine in Japan

Tokushu Tokai Paper has kicked off trial runs on a new tissue paper machine at its Shimada mill in Shimada city, Shizuoka prefecture, Japan.

The 2.2m wide unit, PM 1, has a daily production rate of 50 tonnes, or 18,000tpy. It will produce high-quality grades for converting into value-added products, such as hand towels and coffee filter paper.

The firm plans to erect another, similar machine, PM 2, at the plant, with startup scheduled for December next year.

With the investment in the two new PMs, the company aims to retire two 18,000tpy units at its Yokoi facility, also in Shimada, which manufacture similar products.

Such a scrap-and-build strategy is common in the Japanese paper and board industry, and is aimed at avoiding causing negative impact on the domestic market due to overcapacity stemming from new machines.

A company spokesman said, however, the exact schedule for retiring the two old machines has not yet been hammered out.

He pointed out that the firm is expected to cut energy costs by Yen 400 million ($3.4 million) per year following the replacements of the old units with the new PMs.

News from RISI (www.risiinfo.com)

Daio to hike tissue paper prices in Japan

Japan's Daio Paper has announced a price hike for its tissue range, effective on deliveries from 21 January.

The firm has put the hike at a minimum of 10%. It cited increased material costs consequent to the huge decline of the yen against the dollar as the main driver of the hike.

Like most other leading Japanese papermakers, Daio has also announced a 10% hike on its graphic paper range, though that one is scheduled on deliveries from 1 February.

News from RISI (www.risiinfo.com)

THE NETHERLANDS

Van Houtum to rebuild PM4

Independent hygienic paper producer Van Houtum is to boost its capacity after it signed up Toscotec to carry out a dry end rebuild of its PM4 tissue machine at its Netherlands-based Swalmen site.

Start-up of the machine at the family-owned company is scheduled for the third quarter of 2015.

The site produces 45,000tpy of tissue

Sofidel's Delicarta paper mill: the technology used makes it possible to recover up to 75% of wastewater

from recovered paper on two machines and a separate location nearby houses nine converting lines: three rewinders produce toilet and industrial products and six lines produce interfold and multifold products.
Toscotec's delivery includes a new reel TT Reel-P that will replace the existing old one.
The project will be handled on a turnkey basis, including dismantling of the existing equipment, installation of the new machinery, start-up assistance and training services.
The new machine parts will be designed for an operative speed up to 1,800mpm with a paper width of 2,600mm.

ITALY

Sofidel starts up wastewater treatment plant at Delicarta

Sofidel has started up a wastewater treatment plant at its Delicarta paper mill in Italy.
The overall investment for the implementation of the project - which the company said is the first in the paper tissue sector - was €3m.
The technology used makes it possible to recover up to 75% of wastewater, saving 350,000m3 fresh water annually.
The process involves three phases: in the first phase the wastewater undergoes a biological process, in the second (for solid-liquid separation) it undergoes a ultrafiltration section, and the third and last phase aims to eliminating the remaining salt fraction, a process that consists of a reverse osmosis system.
The company's technical partner is Degremont, with General Electric handling the MBR (Membrane Biological Reactor) aspect of the process.

'Sofidel starts-up wastewater treatment plant which it said is the first of its kind in the paper tissue sector'

FRANCE

SCA to build biological wastewater treatment plant at Kunheim mill in France

SCA will add a biological water treatment stage to the wastewater treatment plant at its 50,000tpy Kunheim tissue mill in Alsace in northeastern France, using lagoons in which it will plant reeds.
This is the first of its kind in France, the company said, and will improve the quality of the water discharged.
Construction started in January and the installation will be done between June and August.
The new treatment station will be inaugurated in September.
SCA is using local suppliers, but declined to comment on the size of the investment required.

The mill's wastewater will first go through the existing physicochemical treatment facility and then be directed to the biological treatment stage.
There, it will first be filtered by a sieve, stored in a vat and cooled by a heat exchanger, before being spread over the lagoons.
The water will then be naturally filtered through layers of gravel and sand in the reed bed and the bacteria attached to the roots of the reed will digest the organic matter in the wastewater.
The combination of the bacteria, the reeds and the filtering layers will thus allow treatment of the water without the addition of chemicals and high energy consumption.
At the bottom of the lagoons, a network of drains will bring the water to the river Rhine.

News from RISI (www.risiinfo.com)

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CHINA

Hebei Xuesong Paper boosts capacity

China's Hebei Xuesong Paper has boosted its capacity after it signed for its second Intelli-Tissue® 1200 EcoEc tissue machine supplied by PMP Group.
TM2 has a reel trim of 2,850mm, a design speed of 1,200m/min and capacity of 60tpd.
It is the twin line to TM1 which was successfully started up in April 2014 and achieved maximum production capacity five days after start up.
Hebei Xuesong Paper was founded in 1987 and produces high-quality tissue products under the Xuesong brand.
PMP will provide a stock approach system, Intelli-Tissue® 1200 EcoEc machine, mechanical drives, electrical drives, a lubrication system, a steam and condensate system and PLC.

The second Intelli-Tissue® 1200 EcoEc tissue machine to be supplied to Hebei Xuesong Paper

APP completes 20MW solar project

Asia Pulp & Paper has completed a 20MW rooftop solar project at its site Gold HongYe tissue mill in Suzhou, China.
The panels cover around 300,000 square meters (the equivalent of 42 football fields), creating one of the world's largest rooftop solar installations.
Madam Zhai, deputy chief executive at APP China, said: "Investment in renewable energy in China continues apace and we are proud to be a part of growth in the sector. Our rooftops are helping to reduce the country's carbon emissions while at the same time supplying power to the local community."
The site produces toilet paper, box facial and interfold facial tissue products, jumbo roll toilet and hand towel and wet tissue products.
Gold HongYe Paper Group is a subsidiary of APP. The company operates four papermaking mills and sixteen processing plants across China and employs more than 13,000 people.
It produces more that 500,000 tonnes of base paper and 600,000 tonnes of finished goods.

Zhejiang Jingxing Paper starts up TM

China's Zhejiang Jingxing Paper has successfully started up an Andritz-supplied tissue machine with an 18-foot steel Yankee.
Based in Pinghu city, Zhejiang province, China, the PrimeLineST C8 machine produces high quality facial wipes and toilet paper grades.
It has a design speed of 1,900m/min and a paper width of 2.85m.
Start-up of a second Andritz tissue machine for Zhejiang Jingxing Paper has been scheduled before the end of this year.

Yunnan Yunjing resumes pulp and tissue production after earthquake

Yunnan Yunjing Forestry and Pulp Mill has resumed production at its pulp and tissue paper mill in Jinggu county in China's southwestern province of Yunnan.
The facility was closed right after a strong earthquake hit the area on October 7.
The plant, located just 30 km from the epicentre of the quake, has reported no casualties and no apparent damage to the equipment. But it decided to shut the plant nonetheless to carry out a thorough inspection.
A company source said that the two bleached hardwood kraft pulp lines with a combined capacity of 195,000tpy and a 30,000tpy tissue machine at the plant have resumed normal operations.

News from RISI (www.risiinfo.com)

China's C&S Paper to relocate 10,000tpy tissue PM to Zhejiang province mill

China's C&S paper has decided to move a 10,000tpy PM located at a mill in Zhongshan city, Guangdong province to another mill in Jiaxing city, Zhejiang province.
The PM, which started up in 2004, is the only one at the Zhongshan site, which also runs several converting lines.
It has a width of 2.66m and a design speed of 600m/min, and was supplied by Kawanoe Zoki.
The destination Jiaxing mill in the eastern Chinese province of Zhejiang presently operates two Kawanoe Zoki tissue machines with a combined capacity of around 22,000tpy.
A specific timeline for the move has not been announced yet.
After the relocation, jumbo rolls from the firm's other mills in the southern province of Guangdong will be shipped to the Zhongshan plant for processing.
The firm explained that its capacity in South China increased greatly in 2014, while its tissue supplies have been short in East China.
Last year, it started up two 60,000tpy tissue PMs at a new mill in Guangdong province's Luoding city, boosting the company's total tissue capacity to around 450,000tpy.
Each of the identical PMs has a width of

5.6m and a design speed of 1,900m/min. The first came online in May, followed by the second in November.
C&S also runs tissue plants in Guangdong, Sichuan, Hubei, and Hebei provinces with a combined capacity of around 298,000tpy.

News from RISI (www.risiinfo.com)

Vinda boosts tissue capacity to almost one million tpy in 2015

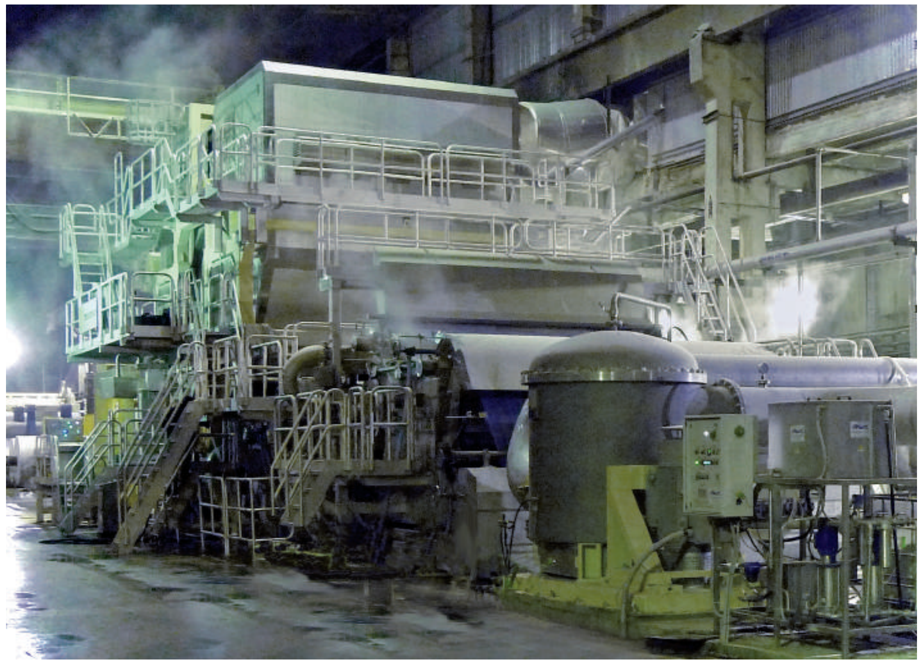
Vinda International Holdings plans to build three new 30,000tpy tissue PMs in China in 2015, raising its total tissue capacity to 980,000tpy.
One of the three will be installed at a mill in Deyang city, Sichuan province. The other two will go to the firm's plant in Laiwu city, in Shandong province.
All the PMs are planned to start up in the fourth quarter this year.
Moreover, the firm is mulling over building new mills in southern and central China to support long-term development in the country.
But no details about the new facilities have been revealed yet.
Vinda currently operates eight mills in China, and has a total tissue capacity of around 890,00tpy. This includes 130,000tpy of capacity added in 2014.
Despite the current oversupply pressure on the Chinese tissue market, the Hong Kong-listed tissue maker believes that ongoing urbanisation, the aging population and the loosening of the one-child policy will continue driving growing domestic consumption of quality hygiene products, including tissue paper, in the long run.
Vinda has also enjoyed booming online sales of its tissue products due to thriving e-commerce China.
Last year, online sales accounted for about 7.0% of the firm's total sales volume - a quick rise from 2.6% in 2013.
Vinda reported a sales income of HK$ 8 billion for 2014, up 17.5% year-on-year. Its net profit also increased, by 9.3% to HK$ 593 million.

News from RISI (www.risiinfo.com)

China's Hengan starts up new 60,000tpy tissue PM in Hunan province

China's Hengan International has started up a new 60,000tpy tissue PM at a mill in Changde city, Hunan province.
The commissioning has raised its total tissue capacity to 1.03 million tpy.
The machine, which came online in January, was supplied by Andritz.
It has a width of 5.6m and a design speed of 2,000m/min.
An identical tissue PM was fired up at the same plant in 2014.
The firm will start running six more 60,000tpy tissue PMs in 2015 and 2016.
A pair will go to its mill in Chongqing municipality.
Another two units are planned for the Weifang plant in Shandong province, and the remaining two will be installed at the Wuhu mill in Anhui province.
Hengan ordered the eight PMs in 2012, and originally planned to bring all of them online by 2015, with the first one coming on stream in 2013.
However, its aggressive expansion schedule was slowed by growing oversupply pressure in the tissue segment in China.

News from RISI (www.risiinfo.com)



Syassky's new tissue unit is set to come on stream at its Syasstroy mill in the first half of 2016

RUSSIA

Syassky mill to install new tissue PM in western Russia

Russia's Syassky pulp and paper mill has signed up Toscotec to supply a new tissue line at its mill in Syasstroy, in the Leningrad region.
The new 125tpd tissue machine will have a trim width of 4.2m and a maximum speed of 1,400m/min.
The crescent former tissue machine will be fitted with a single layer headbox, a single press configuration with suction pressure roll TT SPR1045, a 12 FT diameter Steel Yankee Dryer TT SYD-12FT and a reel section TT Reel-P. The PM will use virgin pulp as raw material.
The new unit is set to come on stream in the first half of 2016. It will replace the existing 20,000tpy PM3.
Toscotec will also deliver the approach flow system, the stock preparation plant, gas heated hood and steam and condensate system from Toscotec associate Milltech, as well as the electrification and control system. Engineering and services such as erection supervision, training, commissioning and start-up assistance are also included in the order.
The value of the investment was not disclosed.
The Syassky mill houses three tissue machines, which manufacture some 85,000tpy of paper.

TWM Project Survey 2014/15 clarifications:
Toscotec's Grigiskes project is in Lithuania and not in Mexico; Toscotec's Syassky project is just in Russia.

By Fisher International's **Bill Burns**

France – T&T strength in an overall weakened market

France is one of the top ten paper making countries in the world but, like elsewhere, the shrinking global market for printing and writing (P&W) in the last decade is putting this distinction at risk. Today, the French paper market is dominated by packaging. Printing and writing is second at a little less than half of packaging and about twice that of other major grades like Towel and Tissue (T&T) (Figure 1). Over the last ten years, the total paper market has diminished by nearly two million tonnes. In 2005, packaging was 39% of the market and P&W was 27%, where today they are 40% and 19% respectively. During that same period, T&T has grown by approximately 100,000 tonnes (Figure 2).

Complications of a shrinking market may be aggravated by producer size and regional share of market. There are over fifty paper producers in the French paper market. The top ten producers account for about half the tonnes which leaves the remaining market broadly divided among many players. Thus, the market is highly fragmented with no single producer holding more that 8% market share (Figure 3). T&T is far more consolidated with SCA holding a 40% market share and out producing its closest competitor by more than double (Figure 4). France is the third largest T&T producing country in the region behind Italy and Germany at first and second respectively (Figure 5). This third position is shared with the United Kingdom (UK) and

C F
Bill Burns
Senior consultant, Fisher International

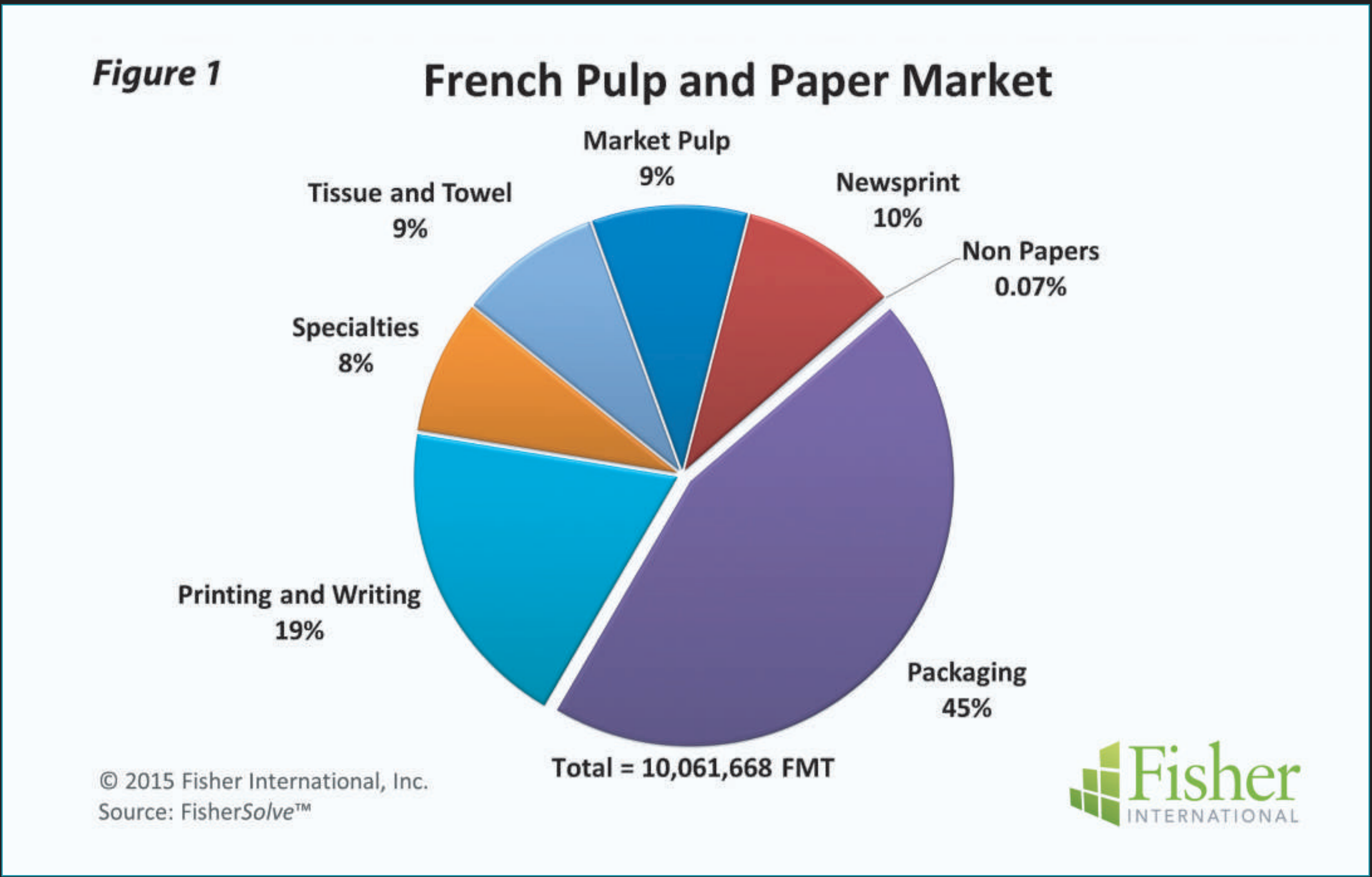


Figure 1 French pulp and paper market

By Fisher International's **Bill Burns**

Spain each at essentially the same production.

A trim versus speed diagnostic of T&T machines in Western Europe shows that France is in the middle of the set (Figure 6) indicating neither a major advantage nor disadvantage in size and speed. A technical age assessment reveals a slight disadvantage in competitive position against the market leaders but in line with upkeep and investment overall (Figure 7).

Fibre is the major cost component in T&T. In Western European countries there is a mixed bag of fibre strategies. Kraft pulp is a substantial part of furnishes in the larger producing countries while recycled fibre is prevalent in the smaller countries. At just above 70%, France is heavy on the use of Kraft and light on the use of recycled fibre but this is not dramatically

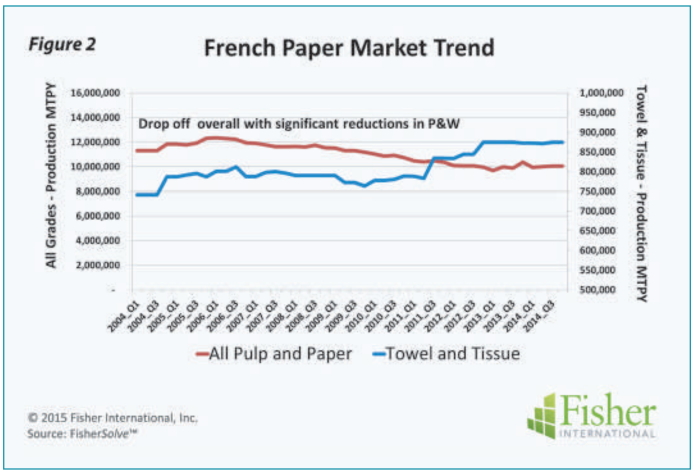


Figure 2 French pulp and paper production trends

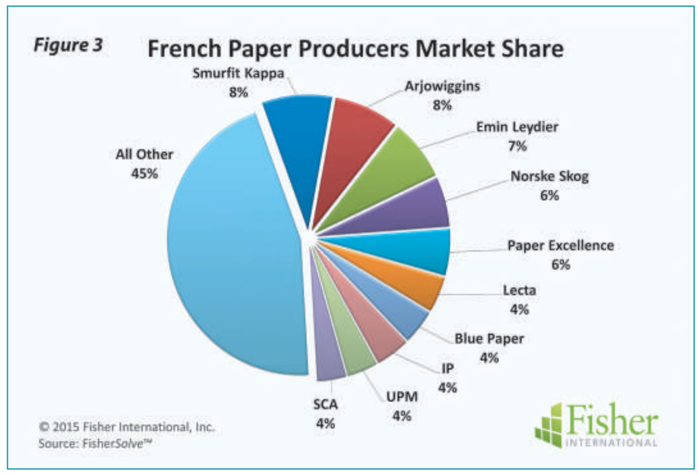


Figure 3 Company shares of total French pulp and paper market

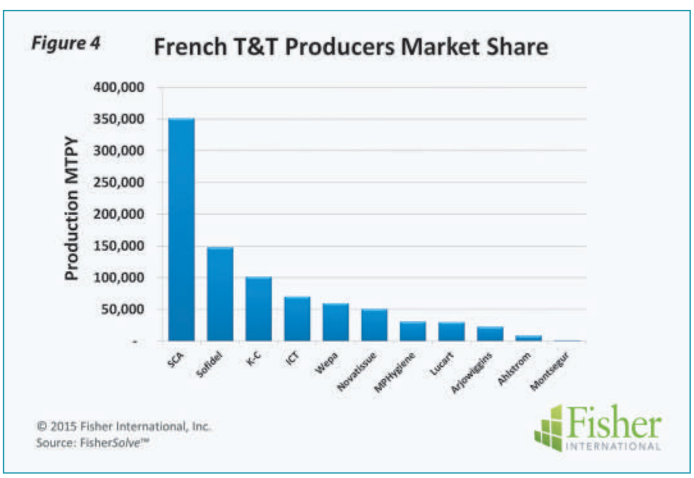


Figure 4 Company share of total French T&T market

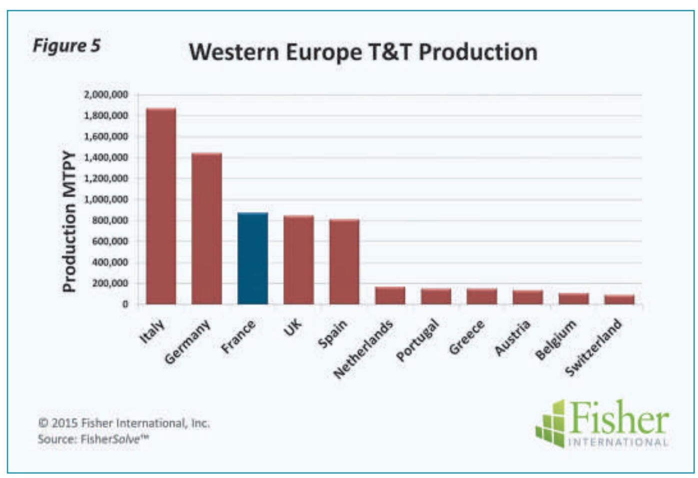


Figure 5 Western European T&T production by country

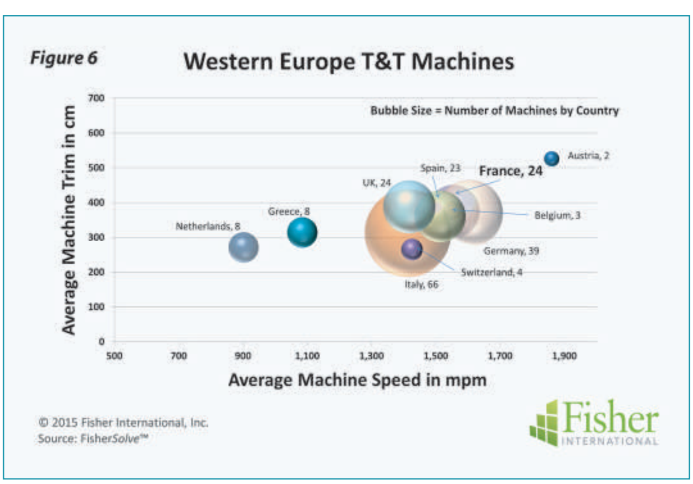


Figure 6 Western Europe T&T average trim and speed by country

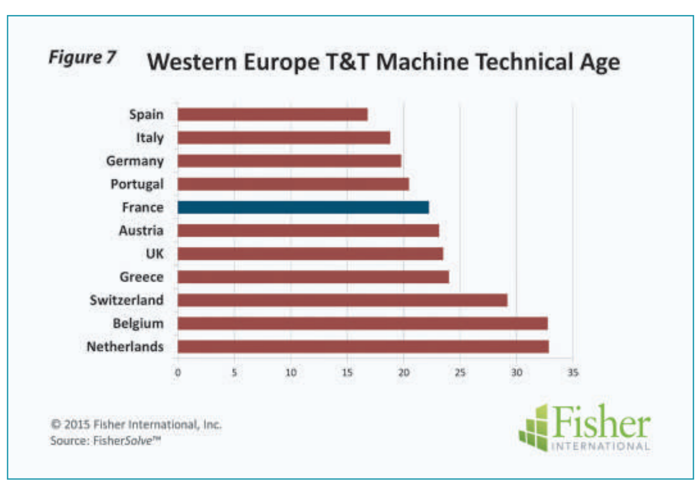


Figure 7 Western Europe T&T average technical age by country

By Fisher International's **Bill Burns**

In numbers: France

9%

T&T production in the French pulp and paper market

40%

'French T&T production is heavily consolidated, with SCA holding the majority market share (40%) and out producing its closest competitor by more than double'

70%

Use of Kraft in T&T production

3rd

Position within Western Europe's largest T&T producing countries

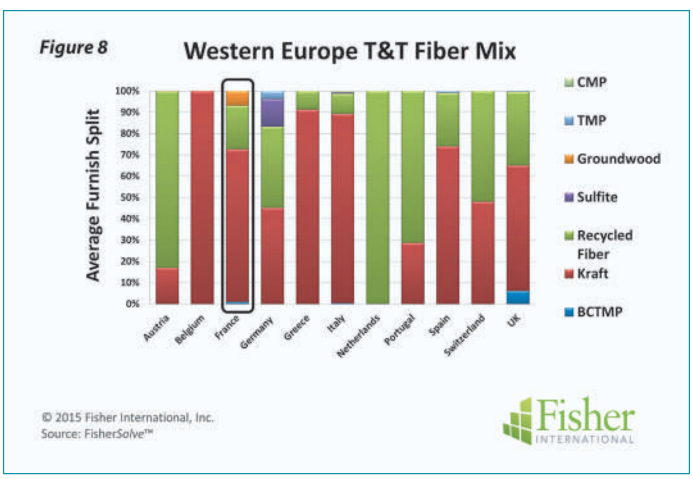


Figure 8 Western Europe T&T average fibre mix by country

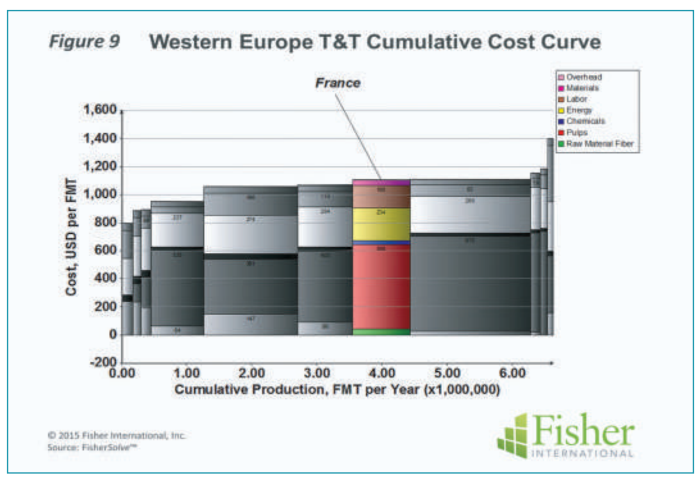


Figure 9 Western European cumulative cost curve highlighting France

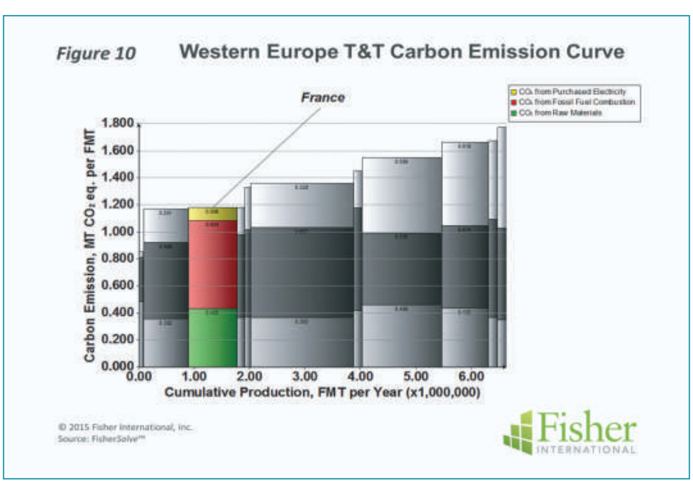


Figure 10 Western European total carbon emissions and cumulative production curve highlighting France

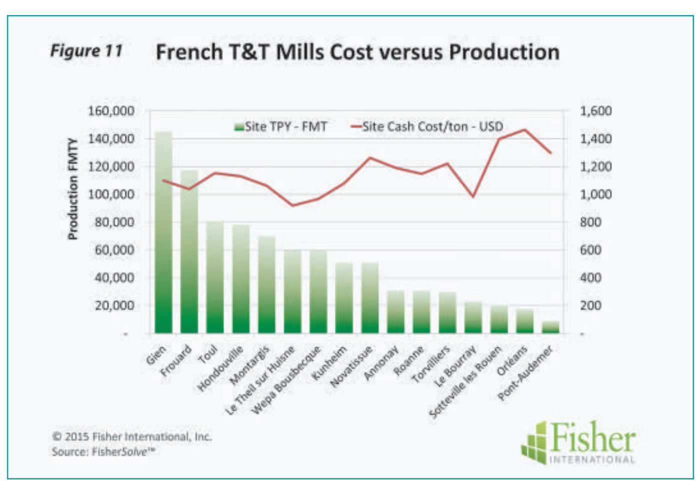


Figure 11 Cost versus production combination chart for French mills

By Fisher International's **Bill Burns**

different from other major producing countries (Figure 8).

Country to country competitiveness is often driven by manufacturing cost position. The cost curve for Western Europe is fairly flat across the bulk of production. There are a few outliers at the top and bottom of the cost curve but most large-capacity countries, including France, are grouped across the middle of the curve, suggesting a very competitive environment (Figure 9).

"Country to country competitiveness is often driven by manufacturing cost position. The cost curve for Western Europe is fairly flat across the bulk of production."

Carbon emissions have the potential to impact cost positions and disrupt this balance in the future. In this regard, France appears to be well positioned when modeling Western European carbon emissions (Figure 10).

In the end, competitiveness in T&T tends to be local. Typically, the company or mill with the best cost position making the right product performance and having adequate capacity to meet the needs of its market area should have a strong market position. Assuming all competitors make comparable quality products that meet end users' needs, the low cost position should command the market. With some exceptions, this appears to be the case in France where the low cost mills are also the highest producing. The smaller mills (in terms of T&T production) have the highest cost per tonne (Figure 11).

The source for market data and analysis in this article is FisherSolve™. Data tables behind Figures 1 - 11 can be obtained from Fisher International. E-mail requests to info@fisheri.com.

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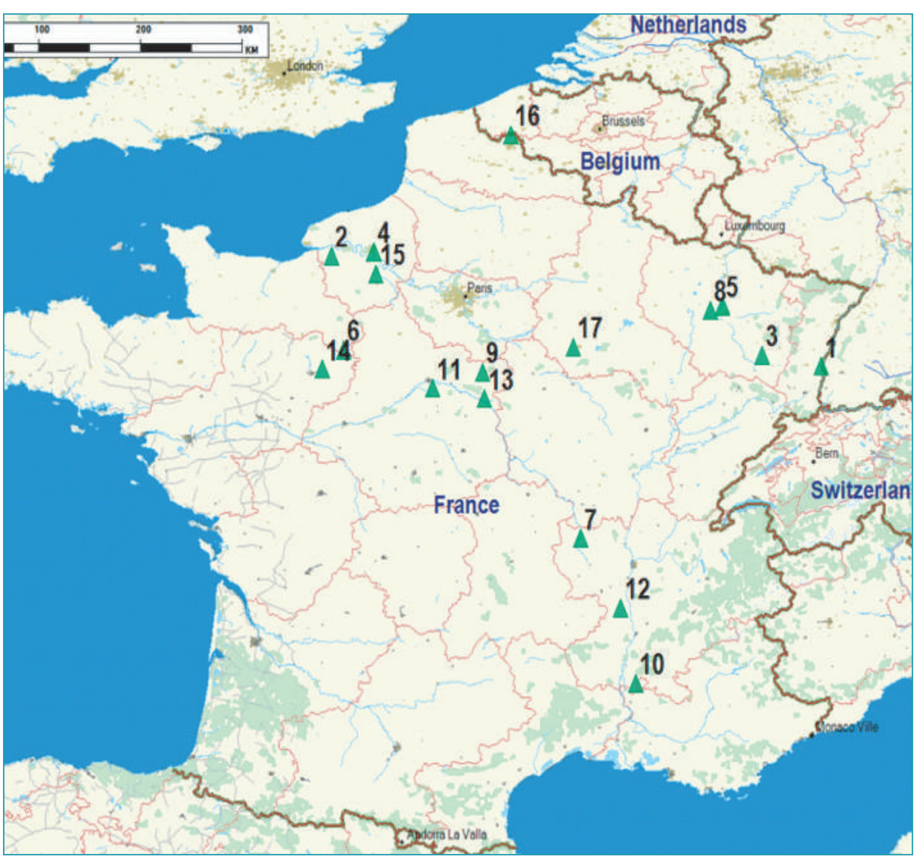
T&T Operating mill French T&T locations in Western Europe



Key

1 SCA	Kunheim
2 Ahlstrom	Pont-Audemer
3 Novatissue	Laval Sur Volonge
4 K-C	Sotteville Les Rouen
5 Sofidel	Frouard
6 SCA	Le Thel-sur-Huisne
7 Sofidel	Roanne
8 K-C	Toul
9 ICT	Montargis
10 Montsegur	Montsegur Sur Lauzon
11 SCA	St Cyr en Val
12 MPHygiene	Annonay
13 SCA	Glen Cedex
14 Arjowiggins	St. Mars la Briere
15 SCA	Hondouville
16 Wepa	Bousbecque
17 Lucart	La Riviere de Corps

Source: FisherSolve ™

By Euromonitor International's **Ian Bell**

France boosts brands thanks to bulk buys

A gloomy economic climate, coupled with low consumer morale and a mature and saturated market, equals a difficult environment for tissue products to thrive in. France, like much of Western Europe, remains in the doldrums, with a stagnating economy and the cost of living rising faster than wages. Despite these difficult conditions, retail tissue in France saw 2% volume and value growth in 2014 to reach €1,754 million – not at all bad given the wider economic background.

Brands have the edge as consumers trade up

With gloomy economic circumstances prompting French consumers to rethink their shopping habits, it would usually be safe to assume that consumers would trade down in retail tissue, given its status as a commodity category. However, this wasn't the case in 2014. A common theme cutting across retail tissue is that consumers are, perhaps unexpectedly, trading up. In toilet paper, for example, the premium SCA brand Moltonel fared better than its stablemate, the mid-priced Lotus.

Although private label reigns supreme in retail tissue, with a value share of 61%, during 2014 private label added little in terms of its share of the market, the figure identical to that reported in 2009. In comparison, SCA, the leading branded player, claimed the largest accumulation of new market share, gaining 0.5 percentage points since 2009 to take its total up to 30.5% in 2014.

But trading-up is a result of widespread price promotion

However, although trading-up has boosted brands' market share and kept the market looking relatively buoyant, despite gloomy economic conditions, it has come at a price for branded product manufacturers. French consumers were persuaded to trade up because 2014 was a year of constant price promotions and discounting. Giant promotions on huge family packs of toilet paper and bumper kitchen towels paradoxically enabled consumers to trade up to premium products. The result is a market where premiumisation and price erosion go hand in hand.

'Discounting has been integral to French consumers' change in preference towards bigger packs, but a shift in retail channel dynamics has also played a part.'

Euromonitor International's global head of tissue and hygiene research

To counter, private label manufacturers have shifted strategy towards producing more premium products, hoping to compete with brands, but, so far – with well-known brands at rock-bottom prices – the tactic has reaped little reward. For branded manufacturers, while discounting has at least kept consumers buying brands, it is also certain to have eroded margins – not an ideal situation. What's more, it is difficult to see how, without a significant positive shift in the wider economy, manufacturers will be able to reduce the number of promotional offers in the year ahead as discounting is now the primary purchase driver in tissue for French consumers.

Click-and-collect boosts buying in bulk

Part and parcel of this promotion frenzy has been an upswing in bulk buying. While consumers in the US rank top in terms of a preference for large pack sizes, Western Europeans, in particular those in countries most affected by the recession, are moving to large pack sizes too. French consumers are leading the way, with the 12-pack of toilet rolls the most popular unit size. Bulk buying helped retail tissue volume growth perform 1% better in 2014 than the review period CAGR.

Of course, discounting has been integral to French consumers' change in preference towards bigger packs, but a shift in retail channel dynamics has also played a part. Over the last couple of years the internet has quickly gained in importance as a retail channel for tissue products in France. The channel's value share jumped from 3% in 2012 to 4% in 2014. This is because of the arrival, in droves, of drive-through click-and-collect stores.

Struggling to facilitate home deliveries without incurring high costs, grocery retailers instead chose to up the convenience factor with click-and-collect stores – and consumers have embraced the concept. Internet retailing enables consumers to quickly find the best bargain, then click-and-collect allows them to buy in bulk and transport home with minimal inconvenience. The rapid pace of expansion of the format is unmatched in any other European market. In fact, France is the country with the highest penetration globally of order-and-collect groceries in 2014. This development in distribution is good news

By Euromonitor International's **Ian Bell**

France: in numbers

€1,754m

2014 retail tissue value growth

51%

Market share of toilet paper in retail tissue category

5%

Kitchen towels value growth rate in 2014

'France is the country with the highest penetration globally of order-and-collect groceries in 2014.'

for volume sales of toilet paper in particular.

Toilet paper brands caught in a cycle of discounts

Toilet paper, by far the most valuable retail tissue category in France, accounting for 51% of the market, registered some of the stronger value and volume growth at 3% and 2%, respectively. More than any other category, toilet paper reaped the rewards of French consumers' shift to click-and-collect for their grocery shopping, simply because of the convenience factor. There can be few that enjoy the task of carrying bumper packs of toilet roll around the supermarket while doing the weekly shop – far better to pull up and have it quickly packed into the car.

Aside from internet shopping, 2014 saw toilet paper consumers trading up to more premium three- and four-ply products, such as SCA's Moltonel Sensitive, a four-ply product for sensitive skin, complete with a flushable tube. It is this trading-up, fuelled by the explosion of in-store promotions, which is at the heart of the category's value growth. While Moltonel gained extra market share off the back of this, there's no doubt that margins will have been squeezed. Looking ahead, it is difficult to see how retailers and manufacturers can escape this discounting cycle anytime soon, and the category is predicted to see a value CAGR of just 1% to 2019 as a consequence.

Kitchen towels benefit from cocooning

It was kitchen towels, however, that recorded the highest value growth rate in the category in 2014, at 5%. Volume growth, meanwhile, was a healthy 3%. Furthermore, kitchen towels saw growth in unit prices, no mean feat in France's promotion-driven market.

A number of factors have combined to contribute to the success of the category. The product has benefitted from becoming an integral part of French consumers' daily kitchen routine, used for a variety of purposes and replacing the likes of cleaning wipes and napkins. To a certain extent, the stifled French economy has also benefitted rather than hindered the category. Many consumers now opt to entertain friends at home rather than dining out, generating a need for a greater volume of kitchen towels. Lastly, maxi-rolls – twice the size of standard rolls – have gained in popularity, further boosting both volume and value sales.

Kitchen towels continue to have healthy prospects in the years ahead and, for SCA, the largest branded manufacturer in the category, herein lies the best opportunity to add to the bottom line anywhere in French tissue.

Tissues and paper tableware show little spark

The two remaining tissue categories, tissues and paper tableware, both struggled to make headway during 2014, with neither category bulky or cumbersome enough to benefit directly as a result of the shift to click-and-collect. Tissue sales saw a 2% drop in volume and a 1% fall in value, suffering because of a mild winter. Paper tableware, meanwhile, saw flat volume and value growth. Negative growth in paper tablecloths, which have fallen out of fashion, was offset by positive growth in napkins, which have benefitted from the cocooning trend and offer a sliver of opportunity to manufacturers.

Businesses as usual for 2015

Looking ahead, the fate of the French retail tissue market will remain influenced by the performance of the French economy. With no huge improvements likely anytime soon, retail tissue is likely to continue largely in the same vein as 2014, with discounts on premium products keeping value and volume sales positive but eroding margins and stifling any prospects of added value.

The one real glimmer of opportunity lies in the cocooning trend, particularly with regard to kitchen towels and, to a certain extent, toilet paper, simply because the more consumers entertain at home, then the more of both they will need. It is here where innovative manufacturers just might be able to capitalise.

By Helen Morris, Tissue World magazine editor

"A Europe-wide outlook is vital for us."

As the WEPA Group's French mill, WEPA Lille's location is key for understanding the dynamics within the French and European tissue markets

It's not surprising that for private label specialist WEPA Lille - located practically on the border of France and Belgium - the tissue markets it keeps the keenest eye on Germany and Italy. A major part of the site's production is exported into the Benelux countries, but it's these two European tissue-producing giants (where private label dominates by a staggering 84% in Germany but just 50% in Italy) that are key to its French market strategy.

Established in 1948, the WEPA Group is still family-owned. Its European footprint covers 11 locations dotted across Europe and it claims 25% of the German market share and 8% of Europe's. Its annual tonnage of approximately 640,000 tonnes makes it one of the four largest European producers of hygienic papers.

TWM meets mill manager Pascal Pacaud, group management member Wolfram Hauff and Hector Bermejo, head of sales France at the Bousbecque-based site, the group's French mill.

Hauff says having a Europe-wide outlook is vital for the company, and in France, where private label holds 65-70% of the market, it is seeing trends that are more similar to the German market where private label dominates. "We see France evolving more and more into the German market rather than the Italian market, where private label isn't so dominant," he says.

Helen Morris

Editor, Tissue World magazine

Hygiene papers are everyday products

Demand for private labels are on the rise in France

The private label versus branded market share in France has grown steadily in favour of private label over the past few years. Hauff says: "Private labels are gaining shares and we're expecting the domination of private label in the Germany market to be mirrored more and more in France."

Bermejo adds the company isn't seeing a lot of evidence that brands will grow: "The quality of private label products is now equivalent to branded products."

Despite recessionary climates, cleaning and hygiene is seeing a stable growth rate in France with the market expected to see further growth, with higher and higher demands for quality from customers. Estimated growth for hygiene products in western Europe is approximately 100,000tpy, with demand drivers including population growth, new product specifications, higher quality standards and only limited substitution possibilities. Interestingly, the estimated growth in eastern Europe is 135,000tpy, with demand drivers including GDP growth, increased urbanisation and the increasing penetration of Western European retailers.

Yet the market remains volatile, and WEPA Lille's strategy has been to improve its technical efficiencies with an investment in a tissue PM.

By Helen Morris, Tissue World magazine editor

Pacaud says: "The investment is key to maintain the demand for increased quality of products that is coming from customers. We have had to improve the quality of our equipment."

The Toscotec Ahead 2.0S line is expected to be up and running in the second half of 2015 and will produce 32,000tpy of everyday consumer goods – toilet paper, kitchen towels, cosmetic tissue and paper handkerchiefs. It joins WEPA Lille's two other PMs. "The investment aligns our company even more towards Europe," he adds. "It will help support us to meet the needs of customers in the European food retail sector and extend our presence in the private label segment. We were buying in a lot of jumbo rolls that was less cost effective and this machine fits perfectly; we needed to make the investment for an efficiency point of view and also to remain competitive."

The site also has seven converting lines supplied by Perini, Futura and Gambini – two kitchen towel lines and five toilet tissue. Pacaud adds that throughout the mill energy efficiencies are normal for the company: "We've been improving on this 2-3% year on year."

Left to right: Pascal Pacaud, Wolfram Hauff, Hector Bermejo.

The group has undergone a restructuring process which has resulted in "very fixed rules", which Hauff says has impacted the French site. "We're not doing every product for every price, but try to be strategic. We don't want to offer everything and we are trying to gain volumes without being aggressive as part of a normal optimisation process."

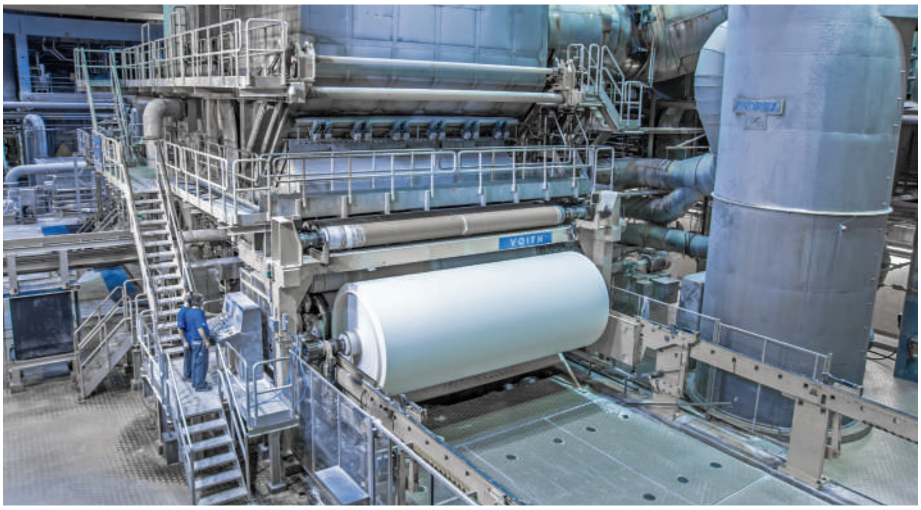
WEPA's French mill in Lille gets a third paper machine later this year

The question throughout has been how the company differentiates itself and one of its main strategies is its network and where it is located around Europe. "Our French mill is key. Innovation is also key, and the French market lends itself well to that."

With the company's Europe-wide view, Bermejo emphasises the power of discount and grocery chains to influence local trends, something he says is especially evident in France: "Hypermarkets, discount stores and super stores here try to attract more consumers through promoting a distinctive range of products with a wide variety of colours and perfumes. There is a lot of innovation surrounding these products and it is vital we maintain good contacts with these customers, it is the key to the market here."

One trend he expects to see more of is the sale of grocery products, including tissue, over the internet. "At 5%, internet shopping in France still has a fairly small share of how tissue products are bought, but click and collect is developing more and more here. It's connected to city growth and more people living as singles in cities. People are ageing and living longer. So we are seeing a lot of potential for this and while it's not changing the drivers for now, it's a topic for the future. We are looking into this a lot, the way people buy their products will continue to change."

While there is no overcapacity in the French tissue marketplace, WEPA Lille is focused on its presence in the surrounding markets. Within France, he adds there's no presence or influence yet from China, but the market is seeing presence from the Turkish tissue players, which is bringing new pressures.


Modern technology for high quality tissue

Hauff adds the French tissue industry is counter-cyclical: "Generally demand is less affected by the economy, and while we're still not seeing high growth, there is still growth at nearly 2% every year in the hygiene sector." Kitchen towels, he adds, are forever useful and convenient. "It's a growing market here, it's very popular and demand is relatively stable."

Sustainability is a huge issue for customers and Hauff says its customers are asking for the company to develop sustainability even further. "The question is how we differentiate ourselves and one of our main strategies is our network and where we are located around Europe. For that, we also consider further growth in countries such as France. Europe works as a network and that the business is steering its network Europe–wide."

By Tissue World magazine editor Helen Morris

"Dream" of second PM within reach for fiercely independent French hygiene producer

Already a market leader, quality product and location are key as MP Hygiene aims to clean up in more ways than one

"France's leading independent hygiene producer" is a phrase that comes up often during TWM's interview with MP Hygiene's president and chief executive Marc Miribel. The French tissue market is dominated by the world's biggest global players, which makes it a unique point that MP Hygiene MP Hygiene is now run by the great grandson of founder Louis-Alexis Miribel, and that the company's market strategy remains proudly and fiercely independent some 152 years later, carefully protected by a family of entrepreneurs.

Miribel is in turn modest and enthusiastic, quick to laugh, and speaks fluently in English. We meet at the company's snow-covered integrated plant located in the picturesque French commune of Annonay in the Rhône-Alpes region of southern France. Established in 1863, he took over the company in 1997 and after viewing opportunities in the market gave the business a new focus: hygiene.

At the time the company had a €6m turnover and 50 staff. It is now a €60m turnover company and produces 30,000tpy across four sites and on 21 converting lines mainly from suppliers Gambini and United Converting. It had been buying parent rolls from Italy, but in 2012 it became fully integrated with the start up of its first tissue machine, supplied by Toscotec. "We made this purchase to be competitive as we were buying parent rolls in from Italy," Miribel says. "We also wanted to have better control over quality and to be completely independent. It would have been difficult to grow and stay competitive without it."

The investment cost €30m and is the only major investment made in this region of France in the last 20 years.

Helen Morris

Editor, Tissue World magazine

Key location: MP Hygiene's Annonay plant in the Rhône-Alpes region close to the Italian and Spanish borders

By Tissue World magazine editor Helen Morris

The move to hygiene was a vital decision: with the arrival of the euro and the abolition of border controls in 2003, the Italians started to sell directly to French retailers and meant MP Hygiene was at risk of losing its competitive advantage. In 2009, the French market also saw a big demand for hygiene products due to the H1N1 flu virus. "France in general had a shortage in hand hygiene products, so there was a big opportunity for us," he says.

MP Hygiene now produces private label products for the AfH market, and products include paper wipes and dispensers, specialist wipes and soap, while 20% of its production is of nonwovens and disposable products.

As a sector he adds it is largely recession proof: "Despite the gloomy economic conditions in Europe, we haven't seen a big impact on this sector. Equally, if the growth in Europe does come back we will see even more demand. The main thing that does impact our business is exchange rates; tissue and hygiene are very subject to that and so when the Euro loses value with the dollar, that's what impacts this industry the most and puts all of us under the most pressure."

There's room for further organic growth and he mentions "the dream" of a second paper machine in the years to come. "Had you asked me that two years ago, I would have said it was impossible. Now it's a dream that's in reach."

MP Hygiene became fully integrated in 2012 with the start up of its first tissue machine

Quality is key: the company manufactures all its wiping products in pure cellulose, all of which are ECO Label qualified, and it only produces FSC and PEFC certified hand towels, which he adds the company is seeing more and more demand for. "We sell premium products and are focused on increasing wet strength. We only use pure cellulose also, no recycled. This was a choice from the start; when you work in hygiene, using pure cellulose is very important. It's all about the quality of the product – it's used for hygiene, so it's very important that it's the best product possible. You don't use recycled shampoo, why would you use recycled hygiene products?"

According to Miribel, the French AfH sector is growing 2-3% per year despite the recession. "There's still growth. The hygiene sector has a lot of potential; the air dryer is not as good as tissue, tissue is more hygienic. Hand hygiene is our speciality."

By Tissue World magazine editor Helen Morris

Location is also key: MP Hygiene is the only paper mill south of Lyon and it is close to the Italian and Spanish borders. He says the company faces competition from Spanish companies - notably Goma-Camps – and from small local converters in Italy, those around Lucca in particular. SCA, he adds, is the main competitor and has 50% of the French AfH market.

Currently 90% of MP Hygiene's production goes into France, with just some tonnage being exported into the Benelux countries. "Our location is very economical for us," he says. It means distribution is very centralised: "It's much easier being located here. It helps us differentiate ourselves against companies such as SCA: we're a French producer and our focus is here in France. Private label is a growing market and market strategy is to be independent and flexible. We are the only independent French player and we hope to stay so."

The steps needed to maintain its position as France's leading independent hygiene producer are largely already mapped out: "Our challenge is to maintain our growth. We've grown 10% year on year for the past three years and we have reached a certain level now where the challenge is to maintain 3% growth." MP Hygiene has 15-20% of the French private label market share.

"The end goal is to be the leader in AfH in the French market: there's power in that, to be a leader and be niche. If you look at the French marketplace and compare it to the UK or the USA, hand wiping still has room for growth. We think it's the future."

Factfile
President and chief executive: Marc Miribel
Turnover: 65m EURO in 2014
EBITDA: €7,15m
Products: paper wipes and dispensers, specialist wipes and soap, nonwovens and disposable products
Location: Annonay, Rhône-Alpes region of southern France
Sectors: private label, AfH

By Tissue World magazine editor Helen Morris

"We are targeting growing regions with a level of strong enough economic development."

Arjowiggins Graphic's chief executive Agnès Roger talks to TWM about the company's market strategy

Arjowiggins Graphic's tissue mill is located in Saint-Mars-la-Brière in north-west France. Founded in 1848, it manufactures 100,000tpy of specialist tissue to sell to converters and its tissue is mainly used for tabletop products, printing and hygiene.

TWM/1: What main tissue sectors are you in within France and what trends are you seeing here?

"We only work in the mother reel market, especially in the deep tone coloured reels for table top and white for heavy printed napkins. Our customers are mainly specialised non-integrated converters. But we are not focused solely on the French market and are now exporting more than 70% of our tissue out of France. The French market is still growing but at a moderate pace."

TWM/2: Are you looking to export more tissue products and if so, to what geographical areas?

"Our most developing markets are outside of France. We are already operating in most geographical areas. However, we usually see that tabletop is the last tissue product to be implemented within a market. We are targeting growing regions with a level of strong enough economic development. One must also deal with the customer usage of the table top product. We also have other opportunity from the hygiene market to industrial application, but which are still with specialist products. It allows us to be strong in Africa and to explore new areas for development."

TWM/3: What are the main trends you're seeing from the French tissue and towel consumer? Have recessionary climates impacted any change in trends?

"The French market has been impacted by the financial crisis but not as strongly as other countries. The main trend is quality reduction to avoid price increase at the customer level. In this way all the specifications can be reduced, grammage, size... Despite this fact and what we have faced since 2008, the coloured business is still running well."

"The French market has been impacted by the financial crisis but not as strongly as other countries. The main trend is quality reduction to avoid price increase at the customer level."

TWM/4: What key trends are you seeing in the private label market in France?

"To answer we need to make the difference between B2B and B2C. In B2B, retailers are looking more and more towards private label; a fairly new proposition for the market. But it's just substitution, replacing traditional products by another one. In most cases the producer stays the same. From this point of view the impact of the private label development is weak.

Helen Morris

Editor, Tissue World magazine

"In B2C, this movement started years ago, and we know that the private label-market share can't increase anymore. It can also be an opportunity for traditional brands to come back to business with products and trends."

TWM/5: Are French consumers buying more and more T&T products online?

"For the moment you can't find many products online except in Supermarkets Drive which is the new big retail trend. But this way to sell is more dedicated to commodity products than to trendy ones."

TWM/6: What technical areas will your French tissue mill prioritise over the next couple of years?

"We aim to increase our production whilst maintaining our capacity to produce small runs and to deal with the complexity of our portfolio. For the technical point of view our priority is cost reduction. We are focused on the energy compliance aspect of our group Arjowiggins Graphic's policy."

By **Chloe Setter**

"It's a luxury I can't do without"

Chloe Setter, 31, is head of policy at a UK children's charity. She lives in South West London.

'I stock up on tissue with balsam and aloe vera – who wants to look like Rudolph the red-nosed reindeer.'

I rather enjoy shopping for tissue products. I like my home comforts generally and this extends to tissue. It's that time of year where everyone has a nasty cold and so I stock up on the soft tissues that contain balsam or aloe vera so as not to end up looking like Rudolf the red-nose reindeer on the commute to work! It really does make a difference and I feel it's worth that extra little bit of money. I'm not fussed by brands – instead going for the supermarket versions of these products to cut costs a little.

With toilet roll, I purchase a supermarket own brand too (Sainsbury's). It's actually their 'Basic' range recycled paper. I always feel a little shabby buying it or if people see that's what I buy but it's actually good quality at a low price. Yes, it's a little thinner but there's a lot of paper on the roll and it is good value. Plus, I care about the tissue and paper I use being recycled and from sustainable sources. Some people I know buy one that includes 'shea butter'. I think that's taking things too far. Soft, yes, but buttery? No thanks! Nearly everyone I know buys some variety of Andrex toilet roll – it's like a staple for most people in this country. But I like that I don't follow the crowd and have found a cheaper alternative, even if I do hide the packaging in the bathroom!

I always buy my tissue products directly from shops, usually supermarkets or pharmacies. I've bought novelty tissues before, with patterns on or comedy toilet rolls as gifts (such as one featuring a Scrabble game oddly enough) but I stick to my usual habits most of the time. I use a lot of kitchen roll as I feel it's a more hygienic option than dishcloths or tea towels. My Mum taught me to economise by ripping them in two (they only rip neatly if tearing from the perforated edge though!) and so I appease my minor guilt over using lots of kitchen roll by using half instead of one. I always feel rather lucky that I have access to the range of tissue products that are on sale in the UK, especially when I go abroad and some of the paper feels like sandpaper sometimes! It's a luxury I can't do without!

'I like that I don't follow the crowd and have found a cheaper alternative, even if I do hide the packaging in the bathroom!'

By FOEX Indexes' **Lars Halén** and **Timo Teräs**

PIX Pulp indices 30.12.2014

NBSK pulp Europe

The pulp market remained fairly firm over the fourth quarter as the share of market pulp of the global fibre consumption has continued to grow. November numbers from PPPC came out with predominantly positive news for the pulp producers. The stalling of the demand growth in BSKP with PPPC-member country shipments down by 1% over the first 11 months, and down even more if fluff pulp was excluded, causes some concern, however, especially over the first quarter when maintenance downtime is typically not taken in the Nordics or North America.

In addition, closures of graphic paper capacity reduce the demand for market BSKP and increase the supply through release of market pulp from earlier integrated use.

These downside risks put southward pressure on prices as well, even if the producer stocks remain below long-term average. Our PIX NBSK index value retreated again quite marginally, in dollar-terms, as it came down by 23 cents, or by 0.02%, and closed at 932.06 USD/tonne. The confidence interval was still quite narrow at 931.44 to 932.68. Euro weakened again, this time by 0.5% against the US dollar. When converting the dollar-value into the weakened euro with the exchange rate, the benchmark moved upwards by 3.54 euro, or by 0.47%, and the PIX NBSK index value in euro ended at 762.80 EUR/tonne.

BHK pulp Europe

In BHKP, the global demand has been growing at a healthy pace over the past 3-4 months. Coupled with closures of market BHKP capacity in Spain and in North America and with delays of starting up new capacity, the market situation for BHKP grades is, at present, better than expected. Global shipments were up from last year, just from PPPC member countries by more than one million tonnes over the first 11 months. Also, the producer stocks, seasonally adjusted, were three days' worth of supply lower than at the end of November 2013.

The price differential to BSKP has started to shrink but it is still wide enough to support further furnish changes in favour of hardwood pulp. But, it should also be remembered that capacity growth will continue in 2015 and more than one million tonnes of market BHKP will be added, taking into account the tail-end of the 2013-14 capacity increases.

The value of Euros depreciated by 0.5% against the US dollar. With the further weakening of the Euro, the PIX BHKP index value in Euros headed higher by 3.11 euro, or by 0.51%, and landed at 607.99 EUR/tonne. The PIX BHKP index value in dollars continued to move gradually upwards, this time by 17 cents/tonne, or by 0.02%, and closed at 742.90 USD/tonne. The confidence interval narrowed and was this time from 741.82 to 743.98.

Lars Halén

Senior manager, FOEX Indexes

Timo Teräs

Managing director, FOEX Indexes

Paper industry

With another difficult year behind us in the pulp and paper industry, it is time to look into the year 2015 to see what is likely to be in store for the industry over the next 12 months. One thing is certain. There will be surprises – hopefully this time more of these will be on the positive side than what we saw during 2014.

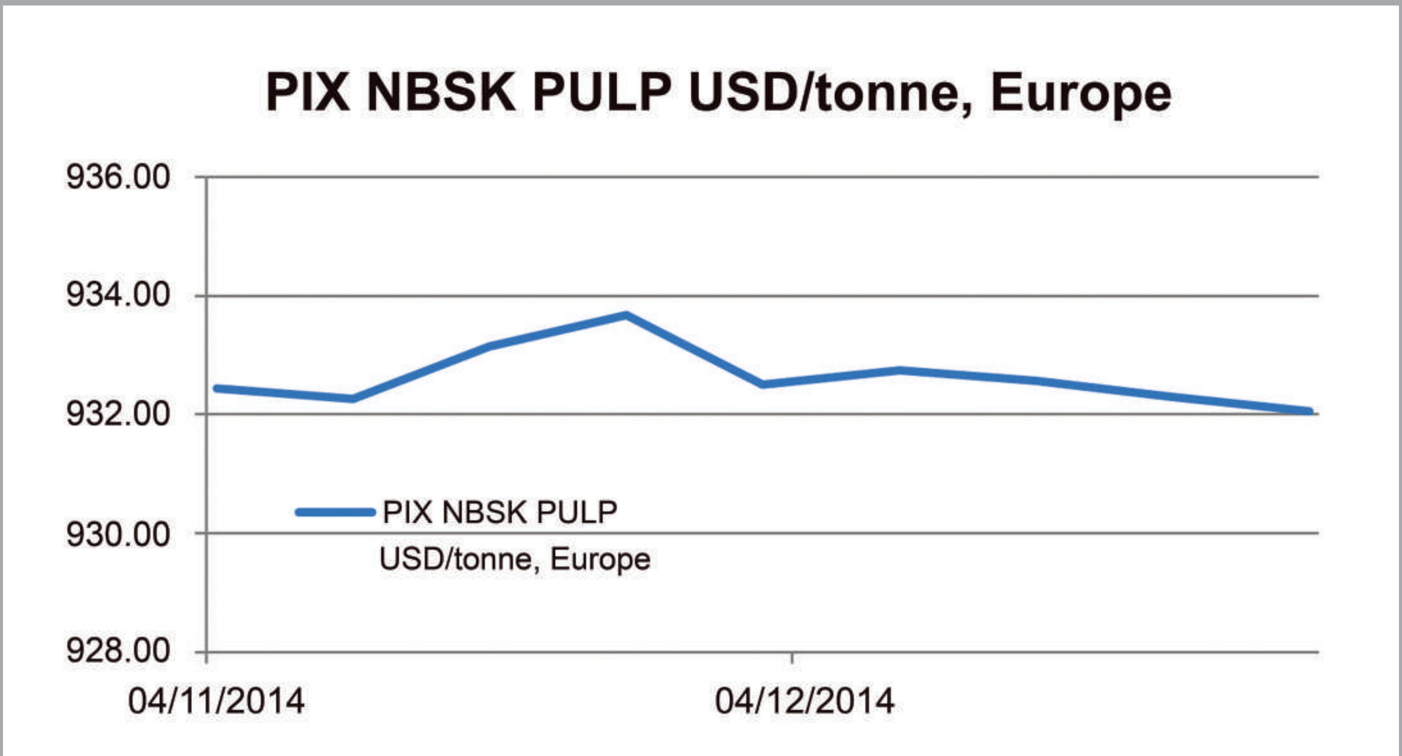
The global economy does not seem to lend much support for demand for paper and board products, maybe with the exception of the US where a fairly strong economic growth appears assured at least over the first half of the year. The structural decline of printing and writing paper demand in the industrialised countries is quasi-certain to continue and the trend is also spreading to the higher income developing economies. In the lower income countries, the demand for graphic papers will continue to grow but as it grows from a low base, the global demand is still likely to continue to go down.

However, there are high hopes that the supply/demand balance in the graphic paper sector will improve. The total volume of the recent or firmly decided up-coming closures in North America and Europe is bigger than 12 months ago. Furthermore, the speeded-up closures of old capacity in China and the delays of some of the new machine installations will, most likely, improve the global balance a bit.

Packaging sector demand will continue to grow, even with a modest economic growth. Environmental advantages of the virgin wood fibre and RP-based products over the competition from other products, mainly plastics, is becoming more and more evident.

By FOEX Indexes' **Lars Halén** and **Timo Teräs**

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.

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

By Pöyry Management Consulting's **Pirkko Petäjä** and **Jyrki Latvala**

New sulphur reduction targets mean a potential 30% increase in sea freight costs

In an ever more challenging business environment, top experts suggest how the industry should manage a cost effective delivery chain in TWM's Distribution Special Feature

An economic downturn and shifting global economy has created a business environment with higher demand and supply variability than before. As revenue bases have been changing, the need to improve competitiveness in terms of costs, quality, customer service level and price has become increasingly important.

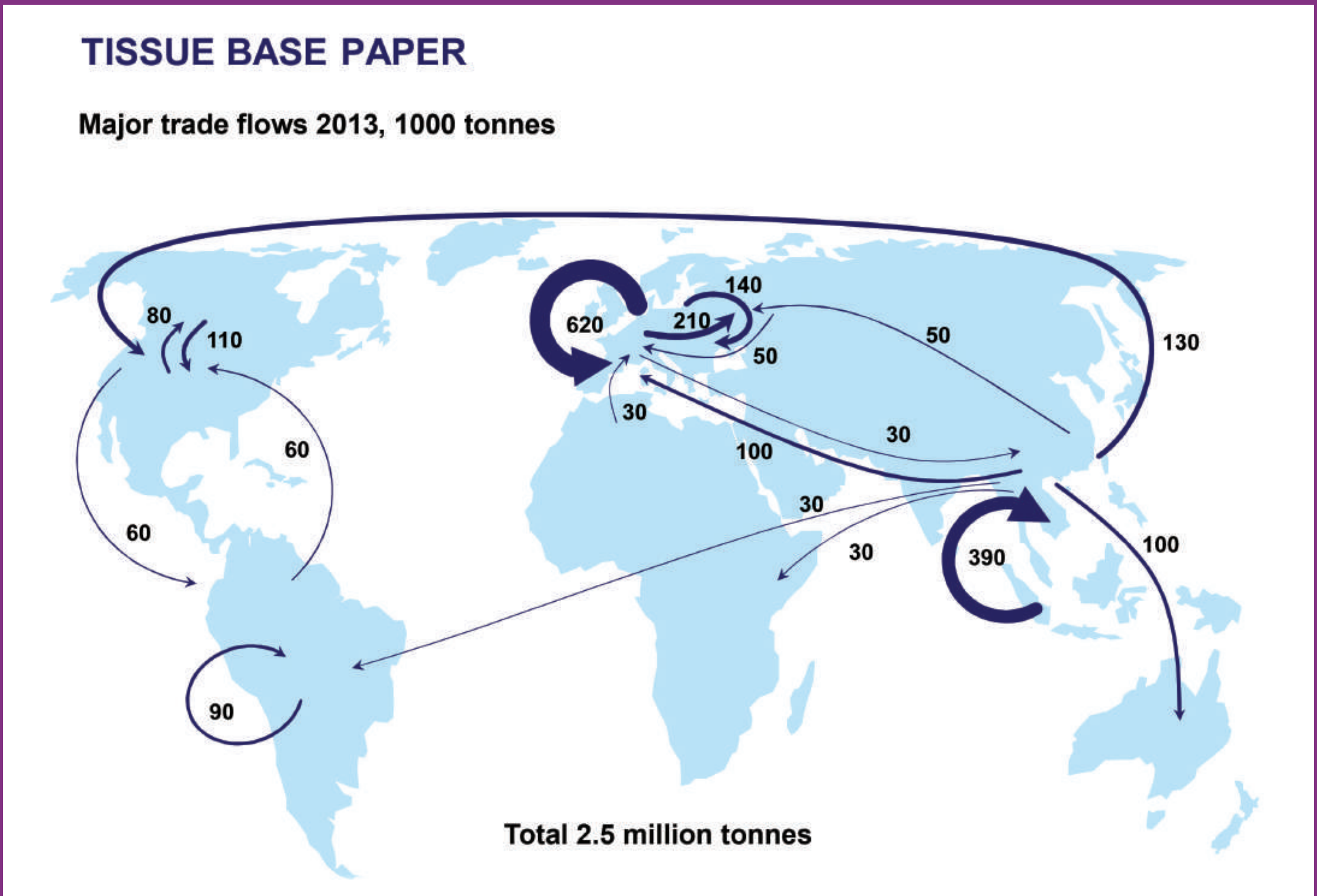
The key questions and topics in a delivery chain that companies are facing in the toughening business environment include:

- How to compensate the impact of the increasing sea freights (sulphur emission directive)?
- How could value be created for customers in the value chain (better steering by RFID)?
- How is the sales and supply chain performance rated compared to the main competitors?
- Lack of visibility to cost accumulation along the value chain typically causes sub optimisation and thereby limits the overall performance and cost competitiveness.
- Reporting structure and steering KPIs should contribute to the coordination and steering of the value chain as a whole.

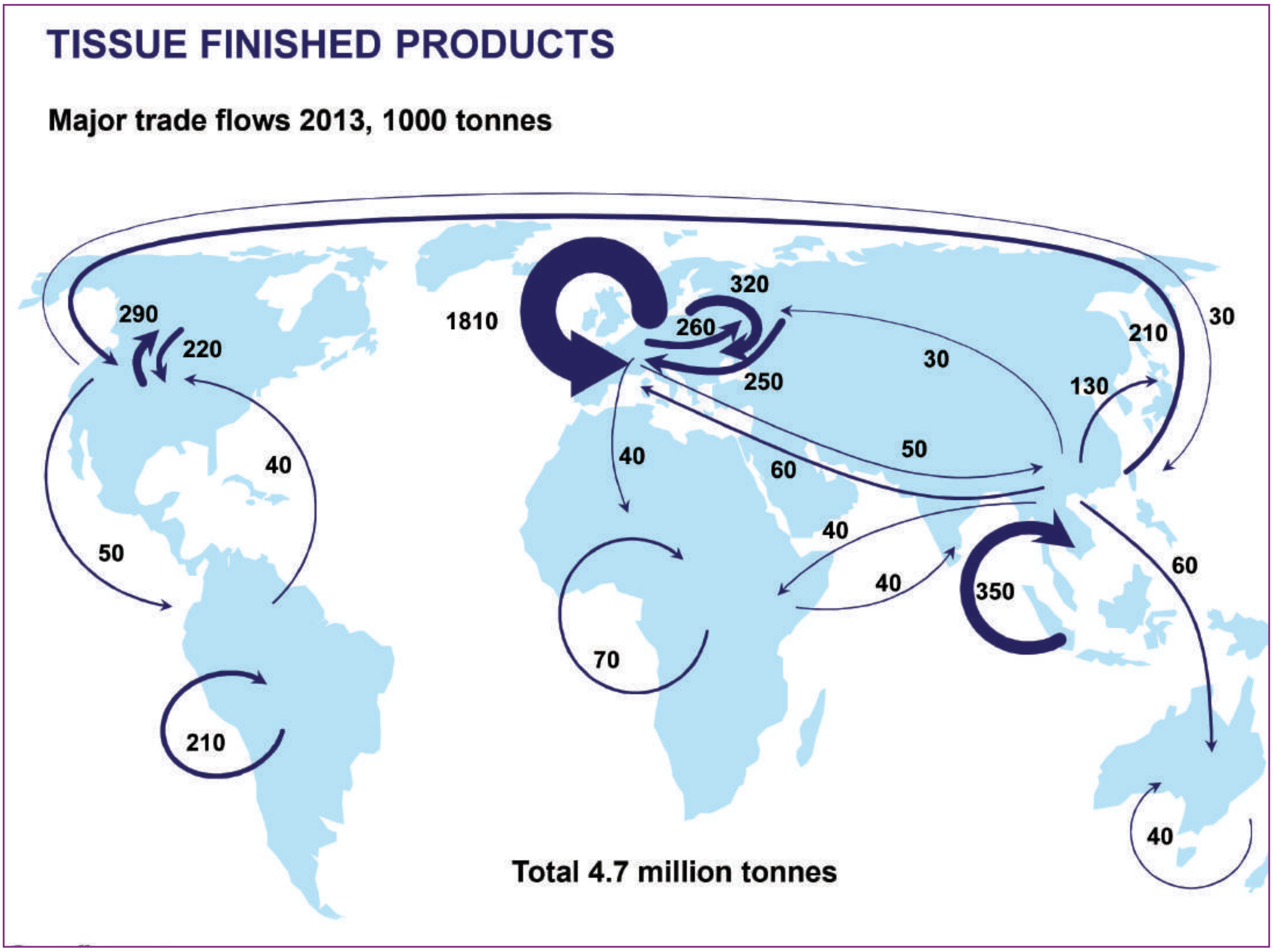
Pirkko Petäjä & Jyrki Latvala

Pöyry Management Consulting

Source: Pöyry Management Consulting



By Pöyry Management Consulting's **Pirkko Petäjä** and **Jyrki Latvala**



Source: Pöyry Management Consulting

'The increase to costs in order to comply with the new sulphur content requirements is estimated at some +30% regardless of how the issue is solved.'

Tissue is bulky and expensive to transport

A normal 40 feet container can carry 25 tonnes of pulp, 12 tonnes of tissue jumbo reels, but depending on category only 6-8 tonnes of finished products. Therefore transporting tissue jumbo reels is about twice as expensive and transporting of finished products at least three times as expensive per tonne as transporting pulp. The high transportation costs are one important reason that has limited tissue trade flows over longer distances; due to the high transport costs tissue has mainly remained as a local or regional business.

Main tissue trade flows

Though tissue does not travel well over very long distances, within Europe the trade over borders is quite significant, and managing the distribution costs is an essential part of a competitive tissue business. Over 30% of tissue market volumes is traded over borders within Europe; the largest markets in the middle. For instance Germany both imports and exports some 700,000tpy.

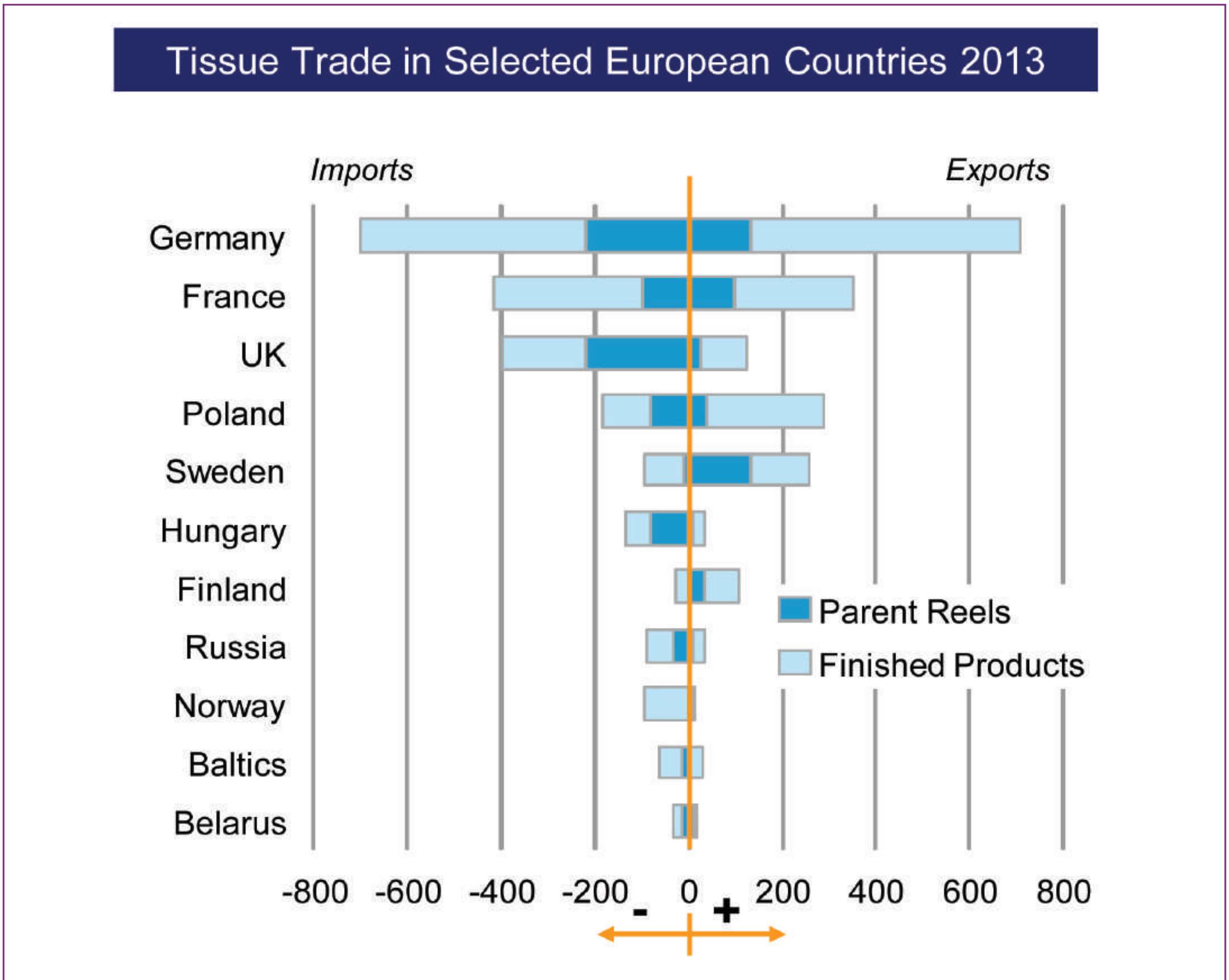
New challenges for Nordic sea transports include sulphur directive

Tissue producers are facing extra challenges for transports in the Baltic Sea and North Sea region when stricter provisions on sulphur emissions from shipping came into force at the beginning of 2015. At the start of the year the sulphur limit for marine fuels was cut to 0.1% in SOx (sulphur oxide) emission control areas in the Baltic Sea, the North Sea and North America's sea areas.

This means reduction of the emissions to one tenth of the previous limit; from 1% to 0.1%. Baltic Sea, North Sea and the English Channel belong to a specific control zone regarding sulphuric emissions where this strict requirement was realised from the beginning of the year.

This new limit can be reached with basically two mechanisms; by changing to low sulphur content fuels or by investing in removing the sulphur from the emissions. Both ways have an impact on costs, the latter also through the impact of reduction of the cargo space.

By Pöyry Management Consulting's **Pirkko Petäjä** and **Jyrki Latvala**



Source: Pöyry Management Consulting

The increase to costs in order to comply with the new sulphur content requirements is estimated at some +30% regardless of how the issue is solved.

The new directive puts different regions to unequal positions. In the Mediterranean the sulphur content of the marine fuel can be 3.5% until 2020. At that point also in all other southern European seas the sulphur limit must be 0.5%. Globally there is still an opportunity to postpone the schedule by five years.

Obviously this is a disadvantage for all businesses requiring transportation in the Baltic Sea, North Sea and the English Channel area, but especially it concerns tissue which is bulky and has higher transportation costs to start with.

'There are ways to improve the delivery chain cost structure to compensate the impact of the increasing sea freights.'

Tissue trade in the Baltic and North Sea geographical regions is remarkably dependent on transportation by sea.

The cost structure of the delivery chain can be improved

There are ways to improve the delivery chain cost structure to compensate the impact of the increasing sea freights. Based on Pöyry's experience, savings of between 5-15% can be realised throughout the delivery chain, which typically translates to 0.5-1.5% EBIT, depending on project scope.
Typical improvement areas include:

- Forecasting accuracy and information visibility throughout the value chain improving e.g. planning of the transports (routing and co-operation with different players in the delivery chain)
- Technical solutions in the vehicles to increase the load in a normal truck can be investigated (e.g. two layers of pallets in a truck)
- Delivery chain and logistics network optimisation (converting strategy and optimal location)

By Pöyry Management Consulting's **Pirkko Petäjä** and **Jyrki Latvala**

In numbers

30%

Tissue market volumes traded over borders within Europe

6-8 tonnes

Depending on category, amount of finished products carried in a normal 40 foot container

+30%

Estimated increase to costs to comply with new sulphur content requirements

Improving delivery chain control may also help

Improving the delivery chain control might also be a way to make the chain more efficient and lower the costs. Radio Frequency Identification (RFID) technology is one way to improve the delivery chain control. It refers to small devices that consist of a small chip and an antenna; the chip is capable of carrying data.

The RFID device serves the same purpose as a bar code or a magnetic strip on the back of a credit card; it provides a unique identifier for that object. Just as a bar code or credit card magnetic strip must be scanned to get the information, the RFID device must be scanned to retrieve the identifying information.

A significant advantage of RFID devices over the bar codes is that the RFID device does not need to be positioned precisely relative to the scanner. We're all familiar with the difficulty that store checkout clerks sometimes have in making sure that a barcode can be read.

In contrast, RFID devices will work within a distance of the scanner. For example, you could just put all of your groceries or purchases in a bag, and set the bag on the scanner. It would be able to query all of the RFID devices and total your purchase immediately. Obviously this has many applications in the distribution chain.

It is only recently that the ability to manufacture the RFID devices has reached the point where they can be used as a "throwaway" inventory or control device. When the device has reached a cost of less than Euro six cents it has become possible to take it into wider usage.

'One reason that it has taken so long for RFID to come into common use is the lack of standards in the industry.'

One reason that it has taken so long for RFID to come into common use is the lack of standards in the industry. Most companies investing in RFID technology only use the tags to track items within their control; many of the benefits of RFID come when items are tracked from company to company or from country to country.

In addition to identification RFID devices can even measure some properties of the object they are attached to, for instance moisture content.

Obviously the device could improve the control of the tissue delivery chain and make the handling simpler. A compatible scanner could be located in a storage, in a terminal on board the vessel or when loading or unloading a vehicle. The information it carries can even create additional value to the product along the delivery chain. By efficiency improvements, reduction of losses, inventory turnover time improvements the better control can reduce costs. Especially in tissue where the shipments are typically much customised the benefits are obvious.

Pöyry Management Consulting is the leading advisor to players within the global paper, pulp, packaging and hygiene sectors.

Summary

- **Due to its bulky nature tissue is not transported very long distances. Tissue transport costs are typically two to three times higher than for instance the transport cost of pulp.**
- **Within Europe tissue trade over European borders is quite common and accounts for over 30% of the European market volume.**
- **In the Nordic area the sea transport is facing new challenges as from the beginning of the year a new sulphur directive entered in the force increasing the cost of sea freights by +30%.**
- **Better planning for delivery chain helps to compensate for the increasing costs; routing optimisation, co-operative means, larger shipments, larger vessels or trucks belong to the options that should be investigated.**
- **Better delivery chain control by using a RFID device may help to reduce costs and adds value to product later in the delivery chain.**
- **There are several ways of improving the cost effectiveness in the tissue delivery chain and sometimes an outside view might help. Pöyry's logistic function has vast experience in various assignments targeting to designing a cost efficient delivery chain.**

A **TWM** report

Converting companies are surging through Europe's economic woes

From strengthening core technology to a new project to "revolutionise" the tissue industry – leading companies look ahead

TW/1 How are you tackling the recessionary climates in Europe?

Sergio Casella, Paper Converting Machine Company Italia president and chief executive: "To be extremely honest, even if, without doubt, recessionary climates in Europe exist, as a company we are not experiencing it at all. On the contrary, in the last two years and this year Europe is the best market for sales volume we have. The company is growing and we are planning to move our operations to bigger and more efficient facilities to follow the continued increase in requests and to provide a better service to our customers."

Marco Dell'Osso, Futura director, external relations, marketing and communications: "Europe has always been a core market for us. While it is true that some European tissue businesses have held off from investing during the past two years or so, we have still been involved in a number of interesting projects in both the consumer and professional sectors in Europe. So we have not had to adopt any special measures for this area. We accept that, over time, different parts of the world where we do business will rise and fall in their fortunes. The solution is not to be wholly reliant on one geographical region, and to innovate constantly so that there is always a good reason to invest in our technology."

Marco Calcagni, Omet sales director: "We feel a continuous instability in the European market but we cannot talk about recession in the tissue market. We have positive periods which are followed by negative ones, there is instability."

Pablo de la Fuente, MTorres' sales director: "We operate in several diverse markets, notably converting and aerospace. For many years now we have found that this broad business base helps us to weather recessions much better than were we focused on only one product line.

"Speaking only about the tissue sector, our centre-driven products are giving customers an immediate increase in efficiency of their converting lines which is a highly valuable characteristic in times of recession.

"As a result, in spite of recessions in key markets around the world, we remain a financially healthy and growing company."

Clockwise from top left: Sergio Casella, Marco Dell'Osso, Marco Calcagni and Pablo de la Fuente

TW/2 With this environment in mind, what technical areas are you prioritising in 2015?

PCMC'S Casella: "Even if we are having success against the economical trends we never stop our development process which is key for our company growth. Our goal is to continue our technological journey to get our machines running without tools, possibly with no or really limited presence of people around and with the highest level of safety. Speed, efficiency, flexibility and quality are already there. In addition we are working on a new project we think will be revolutionary for the tissue product, but I cannot say more than this at this stage."

Futura's Dell'Osso: "We have always been focused, almost fixated, on return on investment, cost per tonne and giving the customer the opportunity to add value. With this in mind we were always in the right place for tough trading conditions in terms of our philosophy. The new whole-line technological solution which we will announce within the next two months will be transformational in terms of operational efficiency, process reliability, space-saving, finished product quality; all elements which contribute to an enhanced ROI.

"Spreading the word about this landmark development is our priority for 2015."

Omet's Calcagni: "We are working hard on very flexible products that can allow the market to grow and find new solutions to fight modern-day problems. We are also involved in cost optimisation and production efficiency because we need to keep our machines the most competitive for the market. The modularity of our range of products is our best feature and makes our products very flexible."

MTorres' de la Fuente: "In terms of our converting group, we continue to focus on solutions that drive down waste and maximise uptime. For example, our system for splicing tissue parent rolls while the line continues to run produces only a small fraction of that produced by competing flying splice systems. We are also focusing on solutions that allow customers to dramatically increase the output of existing lines, by developing a lightning fast parent roll change system for 2-ply lines, (fully-automated parent roll change, operating speed-to-operating speed in less than one minute), that will fit in the footprint of two traditional unwind stands that may have 10 minute roll changes each.

"This is going to be also our focus for 2015 when we are offering to our customers real payback calculations of their investments when incorporating our products."

"We don't seek global or market domination, but to be the best at what we do."

Futura's Dell'Osso

TW/3 Which geographical regions will you be targeting in 2015 and why?

PCMC'S Casella: "We will continue to strengthen our presence in Europe, the USA and Latin America which are today our three main markets and are classic regions and where we have consolidated relationships and very promising customer partnerships."

Futura's Dell'Osso: "We don't seek global or market domination, but to be the best at what we do. We are therefore looking to strengthen our position in the markets where we have the greatest installed base, namely Europe and the Americas, but also to pursue opportunities wherever our approach is appreciated. We have started to build a presence in Asia and Australasia and expect to see steady growth in these areas in the next few years. The Middle East and Africa are also very important in terms of growth potential. Some of our customers are multinational, so often it is a case of partnering them where they chose to invest."

Omet's Calcagni: "Omet has a global presence and we need to target all continents and all regions year by year. We are working to improve our global network in order to follow various growing movements of the market worldwide."

MTorres' de la Fuente: "Along with virtually everyone else in our industry, we have high hopes for China as clearly no other single market has anything close to the growth potential there. That said, our products are ideally suited for mature markets such as Europe and North America. Our exclusive and patented centre-drive unwind technology is the best technical solution for unwinding structured tissues such as TAD, UCTAD, and ATMOS."

By BTG's **Florent Bougerolle**

Understanding vibration to perform smart chatter monitoring

BTG's Florent Bougerolle talks to TWM about how doctor blade vibration monitoring helps tissue makers get valuable insight into costly coating upsets and Yankee chatter problems

Significant financial losses are involved in Yankee repair following a severe episode of chatter. Occurring on average up to once every year on a problematic Yankee, each regrind gets it closer to de-rate point, jeopardising production sustainability.

Doctor vibration monitoring is now a popular means for tracking risky process conditions and anticipating chatter episodes [1], although its effectiveness may be limited by the type of data provided and how it is analysed. Through this article, we will review the fundamentals of understanding vibration, clarify the principle of adequate vibration measurement and analysis and then give recommendations to improve the user's vibration monitoring capabilities.

Measuring and representing vibration correctly

It is well-known that chatters results from vibration generated by friction between the Yankee surface and creping or cleaning doctor [2][3]. Vibration severity is influenced by various process factors, and the consequence of vibration manifests itself as a series of critical frequencies spread over the 0 to 20 kHz range.

Periodic visual inspection with a strobe light and a written or verbal description of the observations are an unreliable means to evaluate the level of dangerous vibration and its evolution. To accurately measure vibration, acceleration of the blade tip is the most suitable parameter to monitor as, unlike velocity, it is specifically adapted to high frequency vibration characterisation found in chatter phenomenon. Acceleration, measured in g gravity (1g equal to 9.80665 m/s^2), is the rate of change of velocity and is proportional to the forces that cause oscillation.

'Vibration monitoring system enables also to picture coating behaviour.'

Florent Bougerolle

BTG's tissue service project manager

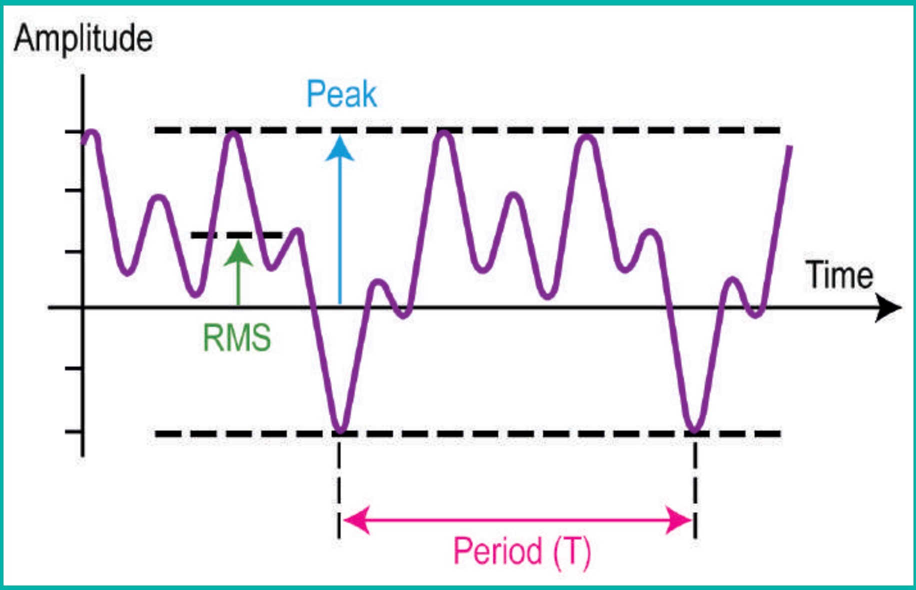


Figure 1. Illustration of peak and RMS acceleration measurement.

Severity or magnitude of the oscillation is called amplitude and is measured in two ways (Fig. 1):

- Root Mean Square Amplitude (RMS): As the vibration is an oscillation around an equilibrium point, a conventional average would give a value of zero. Thus, the square root of the average of the squared values of the waveform (amplitude vs. time) is used. RMS provides a global idea of the vibration severity.
- Peak: Gives the highest vibration amplitude of a waveform for a given period of analysis, generally hidden through average of RMS calculation. Peak is usually used to troubleshoot vibration measurement sensors.

But chatter vibration is also characterised by its frequencies, or the rate at which the doctor blade tip oscillates. Analysis of the spectrum of blade vibration signals (Fig. 2) allows us to observe dominant frequencies, harmonics, bandwidth, and other spectral components of a signal that are not easily detectable in time domain waveforms.

Practically, the spectrum is a graph which displays critical frequencies at which the blade is vibrating, together with the amplitudes of each of them, also called the vibration signature.

By BTG's **Florent Bougerolle**

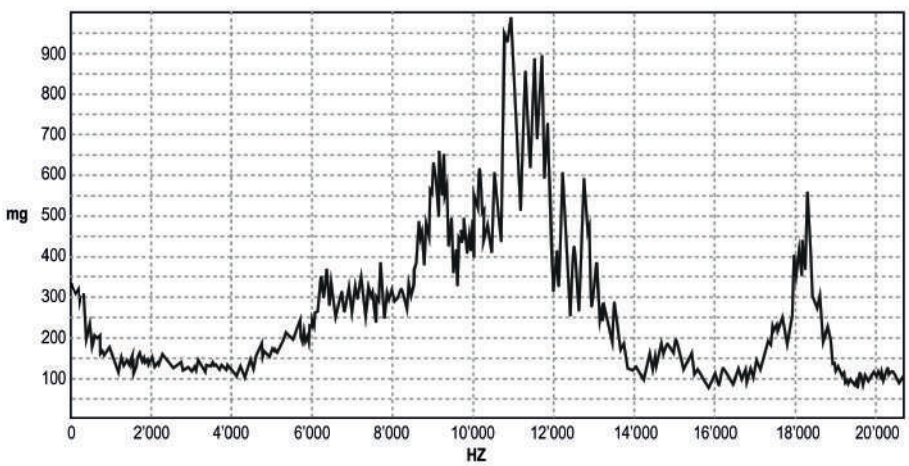
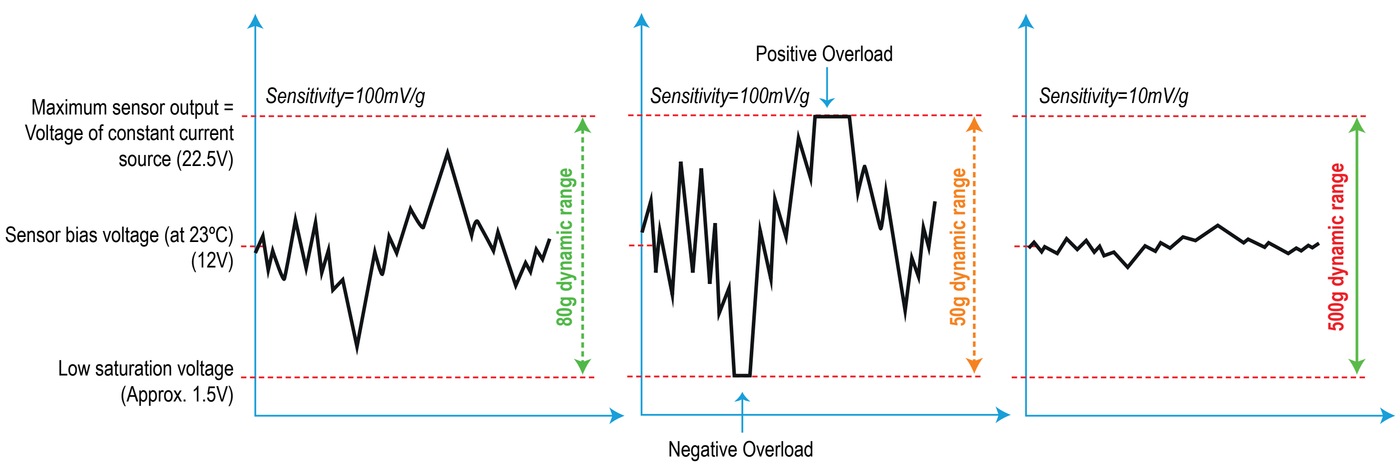


Figure 2. (left) Typical spectrum for a creping doctor.

Figure 3. (below) Dynamic range and sensitivity of sensors



Specifically on tissue machines, and depending on process conditions, the spectrum can show high amplitude at mid-range frequencies usually related to edge contamination and/or high amplitude at high frequencies indicating a problem of hard coating.
Several other frequencies can be also identified through the spectrum, indicating the particular initiator of vibration that can generate chattermarks. Yankee gear box problems, press bouncing, creping and cleaning blade friction, hood pulsations, and related Yankee internals problems [4] can be then identified, leading to an appropriate correction plan. The spectrum is therefore a precious tool to identify main vibration sources over the array of underlying initiators in the process.

Right accelerometer = right information

To measure vibration amplitude and to catch the signature of the tissue machine doctor, IEPE (Integrated Electronic Piezo Electric) accelerometer sensors are today's best technology [5]. Sensors should meet following specifications:

- Resonance frequency of sensor should obviously be over 22 kHz so outside the measuring range. If lower, sensor may enter in resonance at this specific frequency, vibrating itself and adding artificial intensity in the blade vibration amplitude.
- Sensitivity is the amount of change in output signal (volt) for a given change in acceleration (g). A higher sensitivity accelerometer will be more precise and probably more accurate, but usually have a reduced dynamic range. A too-low sensitivity increases the risk that the signal is weak and lost into electrical noise caught by the sensor cable. (Fig. 3)
- Dynamic range is the range between the smallest and the largest acceleration detectable by the accelerometer before overloading the output signal. In tissue machines, 80g peak or below dynamic range sensors should then not be used to avoid inducing the overloading issue. (Fig. 3)

Overloading is in fact a critical source of false signals [6]. When the sensor is overloaded, the signal generated by the integrated amplifier of piezoelectric material is distorted and delivers a value unrelated to the amount of vibration. As a result, the spectrum usually shows a very high low-frequency peak with progressively decreasing amplitude over the high frequency vibrations, called a "Ski Slope".

On a waveform diagram, overloading is characterised by a truncated signal of the vibration peak value at dynamic range limit. Overloading may be solved first by adjusting the sensor's dynamic range, but also by reducing the source of vibration.

Regarding mounting, the sensor should ideally be measuring vibration in a direction perpendicular to the Yankee surface, to catch vibration related to blade tip displacement. In most cases, a solid plate below the blade holder clamping is a great location. Two or more sensors can be mounted per blade holder but this does not guaranty that vibration can be localised with better precision.

Vibration levels

Another important step for performing efficient vibration

By BTG's **Florent Bougerolle**

monitoring is the definition of smart levels – for warnings and alarms – which should trigger counteractions and corrective measures. However, existing standards such as ISO 10816 are not adapted to tissue machine blade friction vibration. The wide range of tissue machine configurations and equipment prevents defining a general admissible level of vibration severity. Vibration signature reveals that some critical frequencies are more important to consider than other ones.

Best practice is, therefore, to follow critical ranges of frequencies corresponding to process problems identified by a machine audit and then to set warning and alarm levels based on past trends and vibration reduction objectives. Let us now look at a real case, and see how this is developed in practice by experts with experience specific to vibration events on tissue machine doctors.

Analysis of spectrum and definition of specific bandwidth indicators

All machines are unique with specific equipment, processes, behaviour, and vibration signature. Thus vibration monitoring configuration requires a customisation explained below.

In our example, to start the process, the spectrum from the blade holder sensor signal is studied to determine vibration signature of the machine under various process conditions. Observation of the stationary Yankee surface completed by a process audit and further vibration spectrum surveillance enables us to identify 2 main types of vibration pattern. These correspond to Yankee condensate extraction and hard coating issues. On this spectrum (see Fig. 5), this corresponded to a low-frequency vibration located between 2.8 to 3.8kHz, and to a high- frequency vibration around 14kHz.

Next, in the vibration monitoring system, specific bandwidth vibration indicators have been created at the above frequencies, to better track these issues and then trigger suitable actions and procedures. A third indicator located at middle frequencies has been also set to alert in case of edge deposits. (Fig. 6)

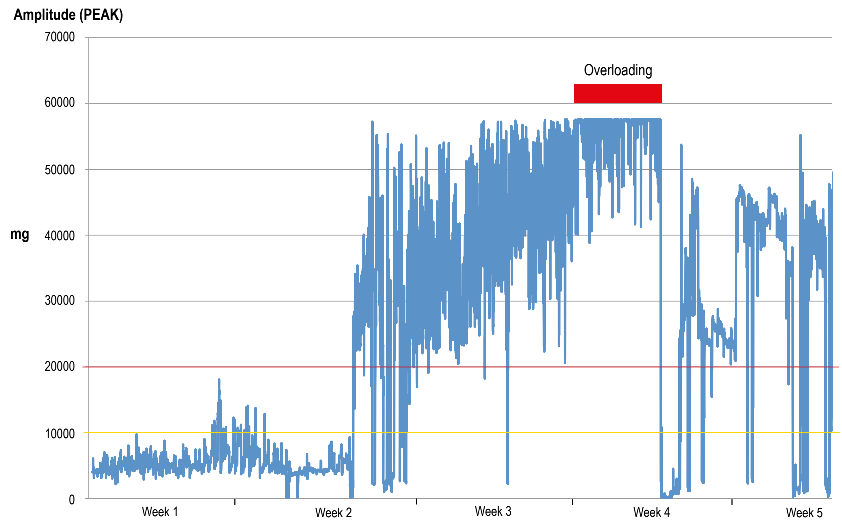


Figure 4. Identification of an overloaded sensor on a waveform diagram.

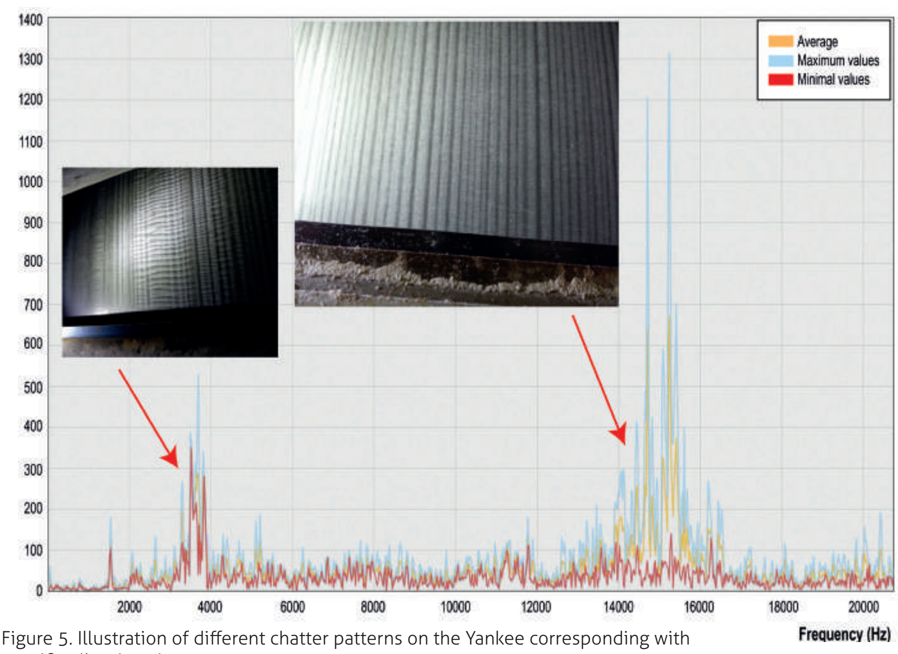


Figure 5. Illustration of different chatter patterns on the Yankee corresponding with specific vibration signature spectrum.

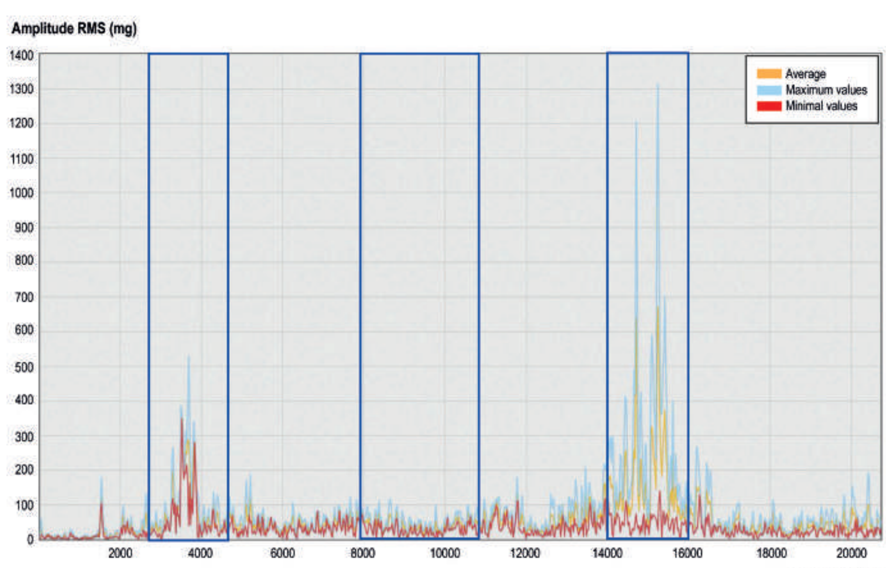


Figure 6. Spectrum with specific bandwidths identified: Low-frequency, medium-frequency, high-frequency indicators

By BTG's **Florent Bougerolle**

By looking at the live diagram (Fig. 7), the high-frequency indicator was clearly way more reactive than total vibration. Thanks to this insight, coating hardness was identified as the main contributor of vibration and lead to an appropriate solution which gets global vibration down.

Due to its average calculation over the whole spectrum, a simple measure of total vibration would not have been able to isolate this critical factor on the machine so quickly. Finally, with the correct bandwidth indicators well established by this trial, alarms can be set on the operator's interface to the vibration monitoring system. We prefer a simple 'traffic light' system (Fig. 8) where the alarms change from green, through yellow to red as the acceleration, and hence vibration energy, at the blade tip increases.

With this in place, the last part of the story is to train the operators in the remedial actions to take when an alarm is observed; typically a change of blade, coating adjustment, equipment check and so on through a series of escalating actions until the issue is resolved.

Conclusion

Doctor blade vibration monitoring is now becoming a standard in tissue manufacturing as the only reliable means to control, evaluate and anticipate dangerous vibration generated at Yankee doctors. Blade tip acceleration, expressed in RMS and PEAK, applied with the right bandwidth analysis of vibration signature is paramount to making it a useful diagnostic tool.

Discrete process phenomena events can then be related to specific vibration frequencies whose smart alarm levels are clearly displayed on the operator's modern monitoring interface.

But monitoring and analysing vibration would be nothing without an efficient tissue machine diagnostic-based response plan helping the operators to trigger the right actions at right time, creating an essential and efficient corrective-action system. Real financial benefits result, since costly Yankee coating and chatter problems can be avoided.

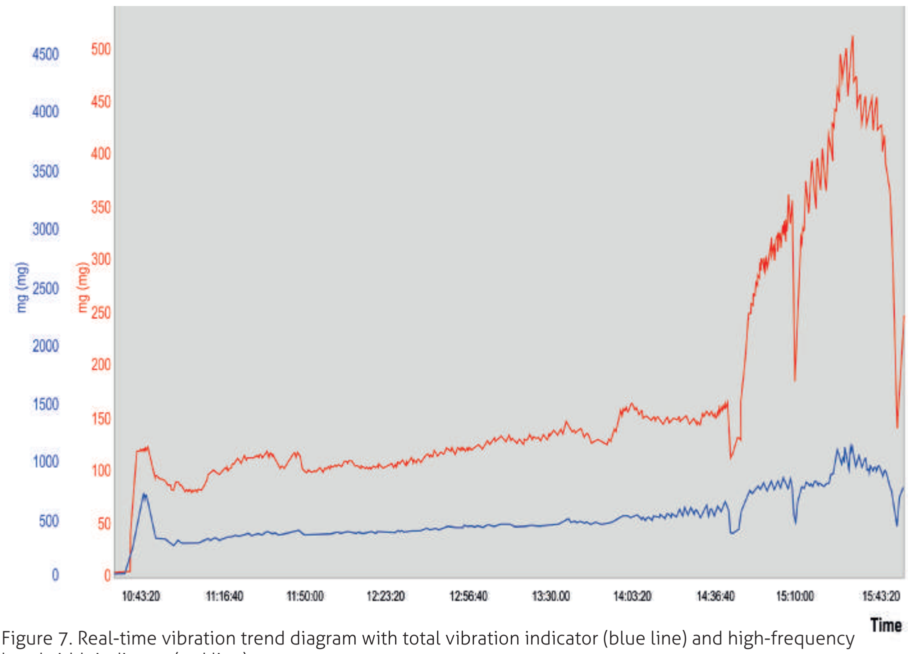


Figure 7. Real-time vibration trend diagram with total vibration indicator (blue line) and high-frequency bandwidth indicator (red line)

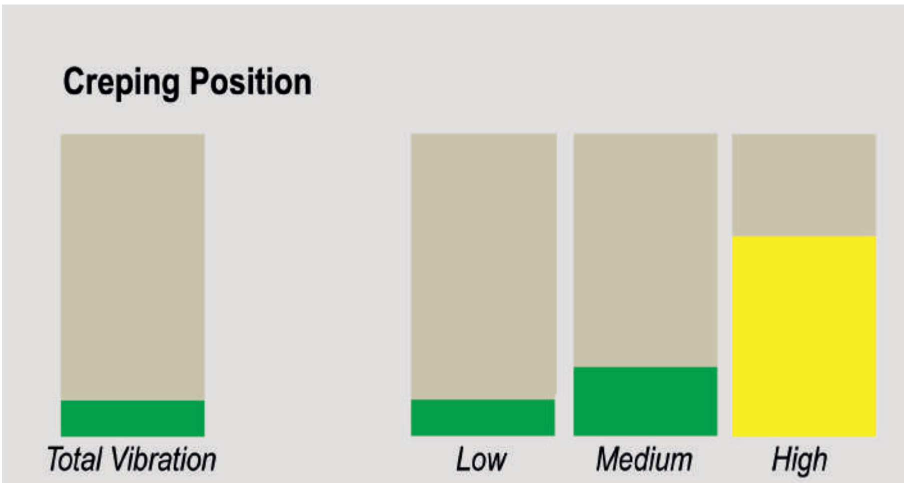


Figure 8. Typical bandwidth indicators with alarm for a configured Vibration Monitoring system

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Event	Date	Location	Website
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ISSA/INTERCLEAN CEE	April 22 - 24, 2015	Warsaw, Poland	www.issainterclean.com/
Asian Paper 2015 Jakarta	April 28 - 30, 2015	Jakarta, Indonesia	www.asianpapershow.com/
CIDPEX 2015	May 25 - 27, 2015	Chengdu, China	www.cnhpia.org/en/conference.htm
Tissue World São Paulo	May 20 - 22, 2015	São Paulo, Brazil	www.tissueworld.com/SaoPaulo
SINCE/ANEX 2015	May 25 - 27, 2015	Shanghai, China	www.anex2015.com/
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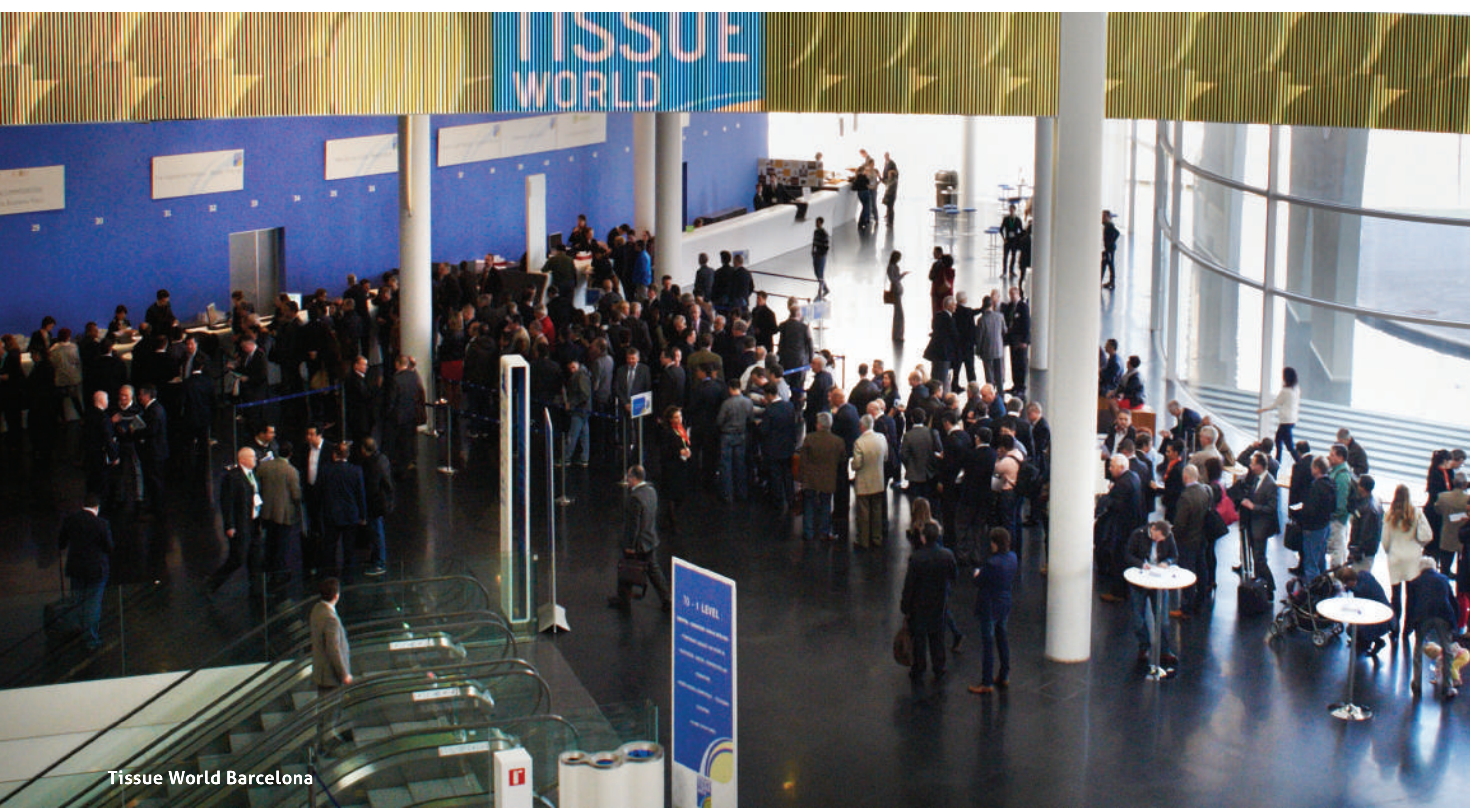

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A. INTEGRATED TISSUE PRODUCTS MAKER

Primary business making paper and producing:

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

B. JUMBO ROLL SUPPLIER

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