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# TWM

TISSUE WORLD MAGAZINE

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## TISSUE WORLD MAGAZINE

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#### Regional Report: North & Northeastern USA

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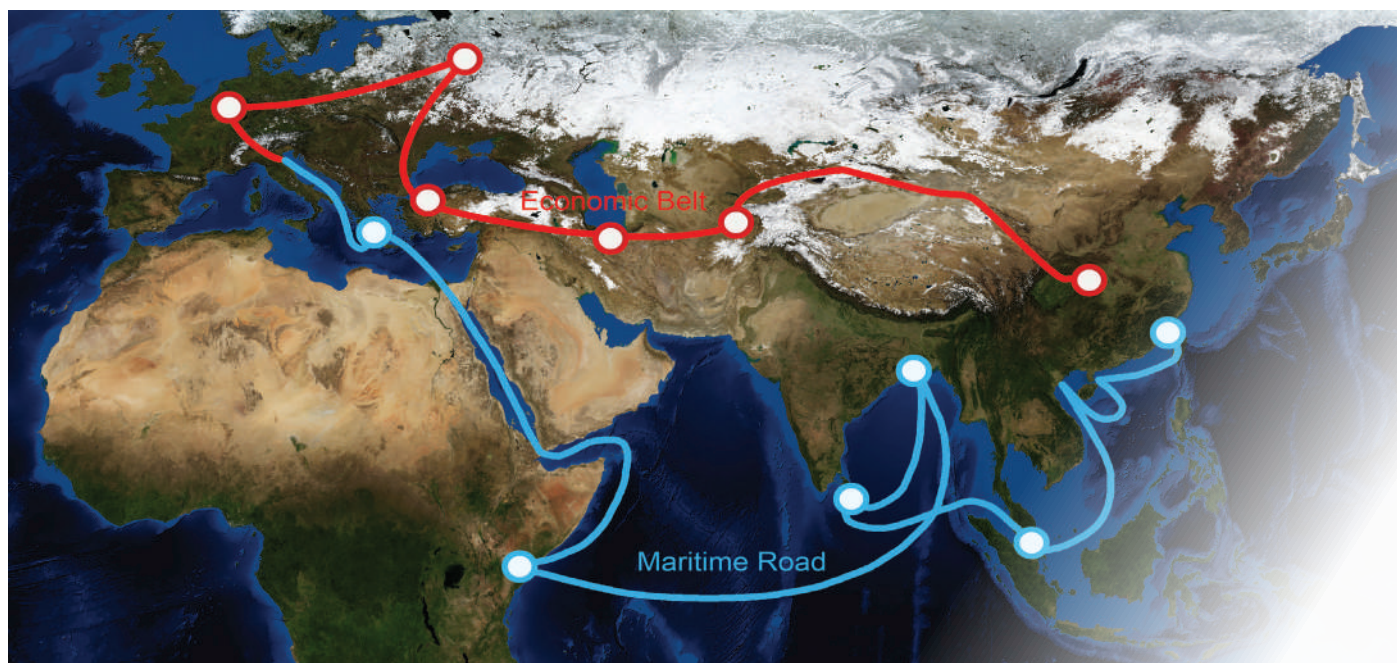
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# Even the great Bobby Fischer would find tissue's US chess game a challenge

**O**ur cover image depicts the US tissue battlefield. The reds strategically occupying the hill represent all we know of the status quo. For many decades the industry in the USA meant few giants monopolising the market in both manufacturing and retail. The environment was not a concern, NGOs not that powerful, and the economy was good.

Then the market began to change. New players started crowding the picture... private label, cheaper resources, aggressive discounting and marketing across the segments. These are the whites on our board, down the hill and facing a climb. The challenges, opportunities and the alternatives have been simmering for a long time and now the fight has become clearer.

Dedicated chess fans will recognise the opening to the game as the white Smith-Morra Gambit against the red Sicilian Defence. The Smith Morra Gambit is a sharp and aggressive line against the Sicilian Defense. A gambit (from ancient Italian gambetto, meaning to trip) is an opening in which a player sacrifices material, usually a pawn, with the hope of achieving an advantage. The gains may take time to come through. Bobby Fischer was famous for thinking 30 moves ahead.

Of course, it will not be just sacrifice comprising the white strategy: innovation, M&A, intelligence, investment, on-line selling, partnerships, dedication, hard work... will be essential. And the reds too are formidably equipped.

Structural changes are underway and the economy is sluggish while income for many is stalled. Overcapacity looms, there are budget cuts to education, energy and healthcare. Where is the consumers' price ceiling? Will an America First strategy work? Over-crowding in the market. Smart mills... contested resources. The issues are many.

Inside, TWM sets out the intelligence which will help to plan your next move.

## Machinery is showing its age

Expanding our review across all latitudes, our Technical Theme on Paper Machines interviews the world's tissue machinery suppliers. Among them, Francesco De Biasi, GapCon director, identifies demand: "The US market is one of the more interesting in terms of opportunities. The market has still some margin of growth in terms of production but the average age of existing machines is quite elevated. We see a big potential in rebuilds." He highlights headboxes, crescent formers, press sections, heat recovery, steel cylinder Yankees and reel sections among others.

## A growth rate of 179%

And in Miami we hear from South Florida Tissue Paper Co president Juan Corzo III whose company was listed for a second year in Inc. Magazines' top 5,000 fastest growing US companies after tripling sales from 2014 to 2017, notched up a growth rate of 179%, and expanding to service all 50 states. He attributes the success



**Helen Morris**

*Senior Editor,  
Tissue World magazine*

to several factors including: "Focusing on larger accounts, bettering service to our customers, producing better quality product, and cutting costs through efficiency in new machinery." Many more details in ExitIssues.

## Top sustainability awards

Suzano, Valmet, LKW WALTER and Fibria were amongst the winners of Sofidel's second Suppliers Sustainability Award. Some 330 participants from 17 countries attended the event, held on 9 November at the magnificent East Wintergarden venue in Canary Wharf in the financial heart of London. Supported by the Italian Ministry for the Environment and Protection of Land and Sea, the award was created to encourage, spread and capitalise on best practice and improvement activity carried out by the group's suppliers each year.

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# What does China's Belt & Road master plan mean for tissue?

**China is a major financier to the world. Just one of many investment vehicles is its initiative to transform transport systems and smooth trade across Asia, Europe and Africa – estimated at \$900bn of projects planned or underway to date. Four years on from launch, initial doubters are being won over, while obstacles remain both abroad and at home. A TWM report.**

**I**t was the magnitude of the project – probably the most ambitious in scale and scope in the world today – which had many in the West shaking their heads at China's One Belt, One Road policy, known as OBOR, at its launch in 2013.

Xi Jinping was nothing if not epoch defining in his vision. OBOR would, said the President, add "splendour to human civilisation" and help build a new era of harmony and trade across the globe.

The historic "project of the century" would transform swathes of the developing world and grease the wheels of trade as never before along a veritable network of Silk Roads.

A massive economic zone connecting Asia, Europe and Africa through a

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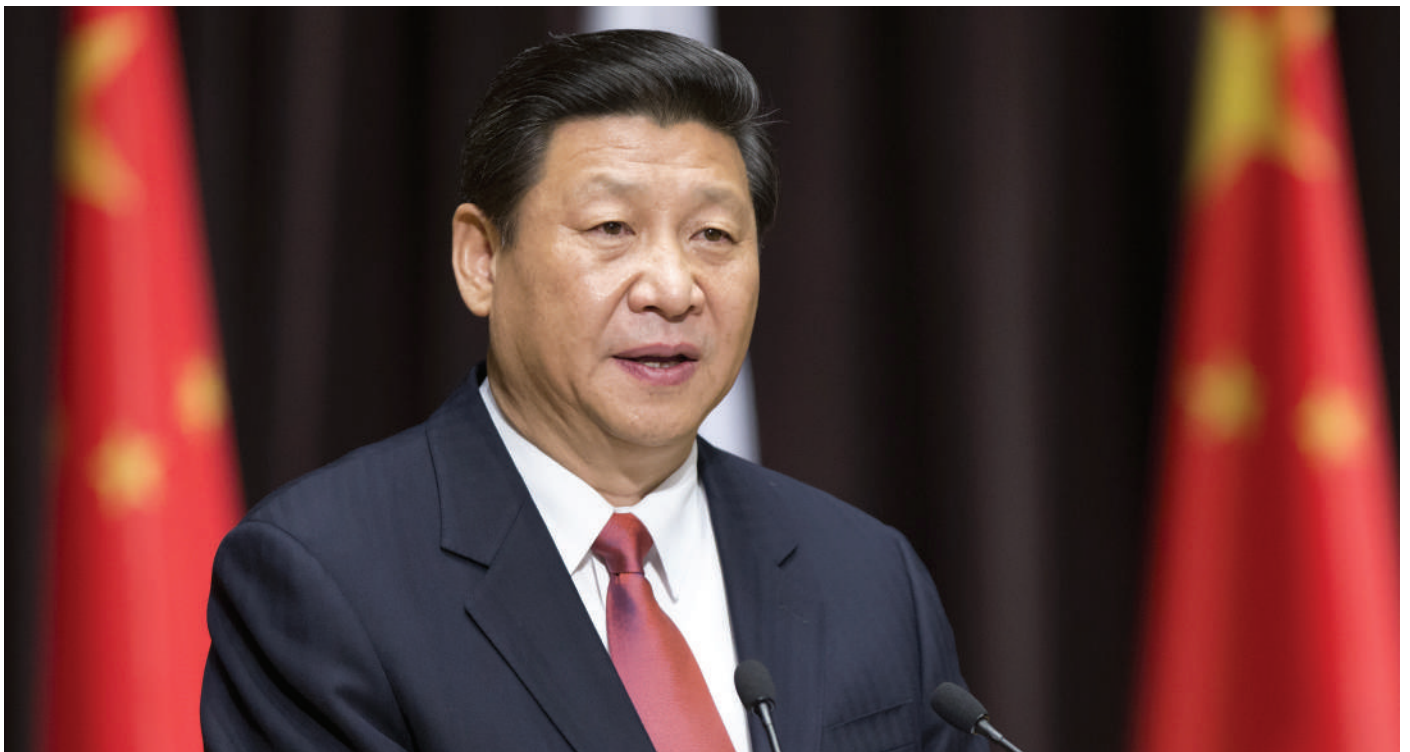
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network of highways, ports, bridges, tunnels and pipelines, and deep water ports in the Arctic, could involve 70 nations and directly or indirectly affect two-thirds of the world's population.

More recently he has said: "Economic growth is not on solid ground ... globalisation is encountering

headwinds. Development has become more uneven – not to mention the other challenges that overshadow the world economy such as wars, conflicts, terrorism and a massive flow of refugees and migrants."

It followed, therefore, that world leaders should reject protectionism,



*"Economic growth is not on solid ground ... globalisation is encountering headwinds. Development has become more uneven – not to mention the other challenges that overshadow the world economy." Chinese president Xi Jinping*

embrace globalisation and pull together. Cooperation was the only way to confront the “profound” changes sweeping the globe.

It happened that Mr Xi was speaking in front of some of those world leaders – Russia’s Vladimir Putin and Turkey’s Recep Tayyip Erdoğan, Pakistan’s then Prime Minister Nawaz Sharif and Myanmar’s Aung San Suu Kyi – but not Donald Trump, Angela Merkel, Emmanuel Macron or Theresa May – at an economic summit in Beijing’s Mao-era Great Hall of the People. He reached for a poetic metaphor: “Swan geese are able to fly far and safely through winds and storms because they move in flocks and help each other as a team. The message is: the best way to meet challenges and achieve better development is through cooperation.”

Suspensions quickly surfaced in western, and some Asian, capitals: this was nothing more than a means to swamp markets with Chinese goods; a ruse to boost China’s own economy by shifting vast excess industrial capacity in cement, steel and other metals to less developed nations and drawing poorer countries tighter into Beijing’s grip; and a protracted search for more profitable homes for China’s vast foreign-exchange reserves, most of which are in low-interest-bearing American government securities.

Nations threatened not to sign up unless free tendering was guaranteed for OBOR contracts; France, Estonia, Greece and Portugal were reported to be withholding support; India went public with its opposition to what one newspaper called “little more than a colonial enterprise.”

To some extent the landscape is changing now, not least because new roads and railway lines are actually being laid down and are beginning to transform it. Tendering has been open. Western multinationals are piling in and making multi-billion deals to sell equipment, technology and services to Chinese firms doing the building.

Hundreds of projects are up and running, many linked to China’s extensive pre-OBOR investment projects for water and waste, energy, telecoms, social and health provisions, banking and legal services.

Given the broad geographical scope and objectives of OBOR, and the secretive nature of some of the countries in which

it operates, a comprehensive accounting is difficult, and is further complicated by the vast number of private, public and international institutions involved.

But some idea of that scope is possible as new projects get underway and others which have been under construction for many years are linked in. Specific OBOR projects include much construction underway in China itself, still a developing country. By 2020 the highway expressway network will increase from 74,000 to 139,000km, rail lines from 91,000 to 120,000km, the number of airports from 175 to 240.

OBOR comes at a time when Asean (the Association of Southeast Asian Nations) is hungry for infrastructure financing. The Asian Development Bank estimates that the region needs US\$5.5 trillion from 2015 to 2030. China’s outward direct investments (ODI) into Asean surged by 87% by 2015.

Major recipients are Vietnam, Indonesia, Cambodia, Malaysia and Laos where, for example, work on a 400km railway link to China began at the end of 2015.

OBOR money has helped to put Singapore in a position to earmark 12.5% of annual income towards further improving its already superb transport systems. Hong Kong and Macau will soon have a massive bridge link, due to open later this year. Astana, the capital of Kazakhstan, is investing in a high-tech rail system, built by the Chinese. A high-speed railway is due to be operational in Thailand by 2021.

A \$46bn China-Pakistan economic corridor is underway where China has since the 2000s been financing the construction of a major port, as it has in Myanmar, Bangladesh and Sri Lanka.

In Africa, China is already the single largest investor across a wide range of projects. China-Africa trade rose from US\$10 billion in 2000 to US\$220 billion in 2014, with Chinese companies purchasing stakes in mining operations in return for loans to finance large-scale infrastructure projects. A high speed railway between Mombasa and Nairobi opened this year, and there are plans to extend it further into Africa’s hinterland. Big borrowers are Angola, Ethiopia, Sudan, Kenya, and the Democratic Republic of Congo.

And as an example of OBOR’s reach into the far western edge of Europe, Mr Xi

himself visited Manchester Airport in the north west of the UK to launch the first direct flight to Beijing as part of a £800m business park project involving Beijing Construction Engineering Group to improve air and shipping links. The first freight train connecting China directly to the UK travelled 7,500 miles on its maiden journey – making it the second-longest route in the world.

OBOR funding links are in the pipeline with other major UK companies including BP, London Metal Exchange, Arup, Standard Chartered, KPMG and HSBC to provide a range of specialist services across the OBOR zone.

That zone of operations could, too, expand. Beijing has said the initiative is “an open and inclusive one,” and welcomes participation in countries where Chinese banks and companies are already financing a wide mix of development contracts.

They streamed \$118bn to Latin America between 2007 and 2014: 53% to Venezuela, 19% to Brazil, 12% each to Ecuador and Argentina. China is currently the largest trade partner of Brazil, Chile and Peru. Latin America mostly exports primary goods and natural resources to China, such as copper, iron, oil and soybeans. In 2015, President Xi pledged to double bilateral trade links to \$500 billion and increase investment to \$250 billion over the next decade.

President of Chile Michelle Bachelet, already committed to promoting a Trans-Pacific optic fibre cable to improve digital connectivity between Asia and Latin America, is looking, with other nations, to the possibility of OBOR funding for tunnels and highways across the Andes Mountains and ports to link Latin America and South America to Asia.

Chile’s ambassador to China Jorge Heine said in a recent column in China’s Global Times that South America should make the most of the opportunity: “For South American countries, poised to make the big leap toward being fully developed nations, but not quite there yet, their association with Asia represents the best hope to make that happen.”

As with Chile, potentially so with many other nations poised to make that big leap.

Sources: Fitch, Thomson/Reuters, BMI Research, Global Economy and Development, HSBC.

# New roads and new belts could reach tissue's greatest untapped markets... given time

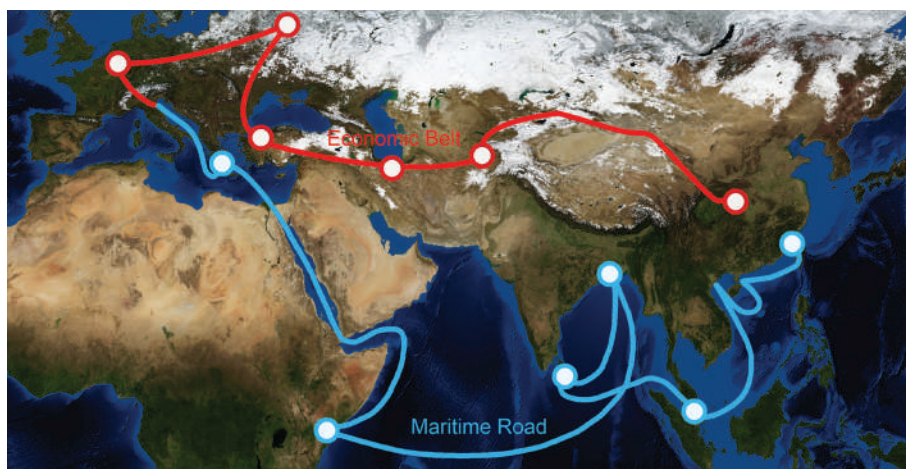
Tissue is a good litmus test of living standards... the more income, the more and better tissue products bought. That has long been a guiding principle. For shoppers, and societies, to reach that happy position they need 'hard' stuff: roads for articulated lorries to thunder along on the way to superstores; bridges to cross the rivers; tunnels to link communities living at different ends of mountains and countries; fast railroads; deep water ports; shipping highways. The AfH market needs a smooth ride to get to that 5 Star hotel.

In the general sense, any improvement in logistic capability will improve all trade. Sustainable infrastructure underpins all economic activity. Inadequate infrastructure remains one of the most pervasive impediments to growth and sustainable development, and consequently in tackling lower incomes.

Good infrastructure unshackles and removes constraints on economic growth and helps increase output and productivity. Investment in sustainable infrastructure can help generate employment, boost international trade, industrial growth, and competitiveness, while reducing inequalities within and among countries.

The hard fact is that infrastructure is ageing and massively under-funded across the globe, including across the US. Transport systems which helped power the success of leading manufacturing nations from the 19th Century onwards are crumbling.

Many of those nations have simply not begun to parallel multi-infrastructure improvements with the growth of entrepreneurial advances they are making in other fields. A transport



'One Belt and One Road': connecting China and the world

backlog is the result, costing billions in delays, damage and half-measure, piecemeal repairs. Developing countries have yet to catch up. Some are making rapid strides, others are barely walking at all.

One Belt, One Road proposes an activist view of development scaled up to the level of three, and probably more, continents.

It has been said that OBOR exceeds the Marshall Plan through which the US loaned over \$132bn at current dollar value to help rebuild European economies after World War II. It has a particular relevance for tissue because in large part the regions where infrastructure is poor are the regions of greatest untapped potential growth for tissue products.

TWM's recent Country Report from India was one glaring example among many. The economy is the sixth-largest in the world measured by nominal GDP and the third-largest by purchasing power parity.

The country is classified as newly industrialised, and one of the G-20 major economies, with an average growth rate of approximately 7% over the last two decades.

Yet huge swathes of the country suffer from poor infrastructure where the rapid and cost-effective delivery of manufacturing and retail services simply haven't been able to reach. This is tissue's biggest untapped market.

TWM's Brazilian coverage highlighted the huge potential of the vast north eastern region currently ill-served by transport links. The same could be said of other regions of the continent where once outside of the cities transport systems serving considerable populations ranges from difficult to a hardship.

Equally sub-standard transport systems are a hindrance to trade in other key tissue regions ... in the rural, provincial regions of Vietnam, Thailand, Russia.

There are cultural, political and security reasons holding back tissue's advance in many regions, but successive younger generations with more modern outlooks and better means of transport are beginning to influence market trends more. Given the base funding the road ahead for tissue could reach further and further.

**Sustainable infrastructure underpins all economic activity. Inadequate infrastructure remains one of the most pervasive impediments to growth and sustainable development, and consequently in tackling lower incomes.**

# Many obstacles along the way

**T**he 'challenges' acknowledged in Xi's vision are many, both externally and internally.

Most of its land routes pass through countries, and not least China's own unstable western regions, that are already politically unstable or are at risk of considerable upheaval over the coming decades. Beyond its trade objectives, OBOR has been seen as a bid to enhance China's international connections and expand its geopolitical influence much further westwards, and thereby play a greater role in shaping Eurasia's security relationships as well as its trading patterns.

A potential minefield if ever there was one. A potential backlash loomed in Europe when officials spoke of Chinese companies evading capital controls, smuggling money out of the country by disguising it as OBOR funds.

Investment in some of the world's more blighted regions is inherently fraught. Over-reach by the risk-hungry China Development Bank and China Eximbank could stumble, and there is reported to be infighting between the most important Chinese institutions involved, including the ministry of commerce, the foreign ministry, the planning commission and China's provinces.

To make matters worse, China is finding it hard to identify profitable projects in many belt-and-road countries (Chinese businessmen in central Asia call it "One Road, One Trap"). Further, China is facing a backlash against some of its plans, with elected governments in certain countries repudiating or seeking to renegotiate projects approved by their authoritarian predecessors.

A recent OBOR forum showed signs of a backlash against the project that may have confirmed some Europeans in their decision to stay away. Yet the suspicion that the project will fail could be misguided. Mr Xi needs the initiative because he has invested so much in it. China needs it because it provides an answer of sorts to some of its economic problems. And Asia needs it because of an unquenchable thirst for infrastructure. Problems or not, Mr Xi is determined to push ahead.

**Investment in some of the world's more blighted regions is inherently fraught. Over-reach by the risk-hungry China Development Bank and China Eximbank could stumble, and there is reported to be infighting between the most important Chinese institutions involved, including the ministry of commerce, the foreign ministry, the planning commission and China's provinces.**

## 'There is another side to this process'

Euromonitor's head of tissue and hygiene industry Svetlana Uduslivaia points to clear benefits for China's tissue industry through improved logistics and exports provided other markets don't impose restrictions on cheaper Chinese goods if the flow increases.

She said: "China's tissue industry has been struggling with domestic oversupply, and access to foreign markets is important. The unmet potential in a lot of Asian markets as well as Africa is very substantial, and there are significant opportunities there. "India's unmet potential in consumer retail tissue is estimated to be in excess of US\$10 billion; well over a US\$1 billion in Russia, Egypt at over US\$1 billion, Nigeria at close to US\$2 billion.

"Many markets have already seen an influx of cheaper Chinese tissue, which added to competition and put pressure on other brands (both international and domestic). Improved logistics for China's industry would mean better/easier and more cost efficient access to foreign markets.

"Good news for Chinese tissue manufacturers and suppliers. Also good news for consumers in the developing markets where there is a need for more affordable products.

"But not likely to be met with enthusiasm by many international

and domestic manufacturers of tissue because of still more competition and more pricing pressures at the times of already tight margins.

"So, there is another side to this process: China might be seeking improved access to foreign markets, but that doesn't necessarily mean that every country will just open up more. US is just one example, as it imposed anti-dumping duties on Chinese tissue imports."

Analyst Greg Grishchenko said: "With the limited growth in local consumption China is in constant motion to use vast tissue forming capacity acquired during the latest decade. While the process of eliminating small non-effective tissue producers inside the country is almost completed, the network of new shipping routes, railroads and bridges as part of Belt and Road plan might bring similar deeds to countries of not only Asia but America, Australia and Africa as well.

"Building new infrastructure capacity across Asia and beyond might deliver significant increase in jumbo rolls shipments across the globe, and gaining advantage over local producers in certain regions.

"Even with limiting factor of protective local tariffs, the Belt and Road initiative might increase pulp shipments from Indonesia, toilet paper sales in Central Asia and Africa and export of Chinese made tissue forming and converting machinery.

**A recent OBOR forum showed signs of a backlash against the project that may have confirmed some Europeans in their decision to stay away. Yet the suspicion that the project will fail could be misguided.**

**In addition to local friction among these countries like recent squabble between Kazakhstan and Kyrgyzstan over "grey" channel imports through quite transparent Chino-Kyrgyz border, Chinese exporters will meet competition from very strong tissue industry in Turkey.**

"However, there are numerous issues that might limit or even fully eliminate untended effect of hastily growing infrastructure. Heavily populated South Asian countries like Pakistan and Bangladesh have very limited growth potential for tissue products due to cultural habits and low personal income.

Central Asian countries of the former Soviet Union might benefit from Belt and Road project by trading local natural resources for Chinese made consumer goods, however, tissue product consumption will still be in low single digits per capita in the near future.

In addition to local friction among these countries like recent squabble between Kazakhstan and Kyrgyzstan over "grey" channel imports through

quite transparent Chino-Kyrgyz border, Chinese exporters will meet competition from very strong tissue industry in Turkey.

"There is an obvious success of the five-year-old company Oasis Brands in the United States claiming to be the fastest growing tissue brand in the country. This small tissue converter employs nearly 300 in the USA and sources its jumbo rolls from APP (Asia Pulp and Paper) – China-based #5 tissue producer in the world. However, despite an aggressive promotion campaign, Oasis Brands with its retail toilet paper and kitchen towels under brand name Fiora along with its sister company Solaris Paper, specialising in the AfH segment can be found only in Asian ethnic enclaves in the US and hardly be noticed anywhere including

major supermarket chains dominated by industry giants Georgia-Pacific, Kimberly-Clark and Procter & Gamble.

"During the recent decade Chinese economic activity across African continent has rapidly increased especially in the highly corrupted countries of the Southern part. This expansion however has met quite strong resistance from local general population due to a common practice of bringing ethnic

"Chinese labour force to newly developed businesses. An impact on tissue product consumption increase is limited to several large city conglomerates where personal income is higher.

"Even with the further improvement of existing shipping channels as a result of the Belt and Road initiative, it is hard to justify economic benefits of bringing constant jumbo roll flow in the areas with strong local tissue industry in the Middle East, Europe or North America. However, this flow does exist in much smaller version in the "grey" market segments."

## A major shift in finance policy and a bid to dominate global trade

**Bilateral policy banks:** China Development Bank, China Eximbank, both known for their risk appetite, and hence their realistic assessment of possible losses in some of the world's more blighted regions.

**State owned banks:** Bank of China, Industrial and Commercial Bank of China, China Construction Bank, Asian Infrastructure Investment Bank, Silk Road Fund, China-Asean Investment Co-operation Fund.

China is leading the new \$50bn international financial institution the Asian Infrastructure Investment Bank, to which 21 countries have signed up. AIIB will be both a rival to the existing Asian Development Bank, an offshoot of Washington financial institutions, and potentially a complement to it.

Many see OBOR as the clearest statement of intent that China now actively seeks to influence global trade flows, increase its economic sphere of influence into Central Asia and beyond, and enable it to secure alternative routes for its energy supplies.

With US President Trump's much criticised withdrawal from the Trans-Pacific Partnership (TPP) trade agreement suggesting that the US is slowly checking itself out of the western Pacific, China is seen to be moving to fill the trade void.

The strategy is multi-directional: with all of China's key industries heavily concentrated on its eastern seaboard, to end over-reliance on shipping trade routes; to shore up its currency markets and to curb and better target the flow of currency overseas; and to build on existing trade projects with a targeted network of infrastructure links across continents.

Beijing has moved dramatically to redirect monetary and fiscal policies. During the last 15 years of intense industrialisation, China's firms ran

construction projects across an expanse roughly equivalent to the built area of all Western Europe.

It was accompanied by frenzied M&A activity. In the last year alone companies spent \$220 billion on assets overseas.

As high as that figure is it is nevertheless down 42% year-on-year as Beijing strives to prop up the yuan by restricting the flow of capital outside the country and clamp down on what state planners call 'irrational' and debt-fuelled acquisitions – property, hotels, entertainment, European football clubs, movie studios – and provide new outlets for its goods on a huge scale.

But companies have proved hard to restrain. Regulators have made it tougher for buyers to win approvals for deals abroad, tightening the screws further since June.

As an example of what an all-encompassing buzzword OBOR has become, Chinese state media has claimed it is in effect a panacea for a

multitude of problems including the Middle East peace process, start-ups in Dubai, currency trading, global poverty reduction, Xinjiang's medical industry, Australian hotels, nuclear power, Polish orchards and, not to restrict its reach, the entire world.

Now deals will be reviewed in minute detail. One group of lenders has been ordered to assess its exposure to offshore acquisitions by several big companies that have been on overseas buying sprees – HNA Group, Dalian Wanda Group and Fosun Group for example, trying to get ahead for the long term.

European officials warned that the initiative has increasingly been hijacked by Chinese companies using it as an excuse to evade capital controls, smuggling money out of the country by disguising it as international investments and partnerships.

Investment will henceforth be under three categories – banned, restricted and encouraged. Scrutinised OBOR falls firmly into the later, and RMB internationalisation will be boosted by well-managed development as regional

**As an example of what an all-encompassing buzzword OBOR has become, Chinese state media has claimed it is in effect a panacea for a multitude of problems including the Middle East peace process, start-ups in Dubai, currency trading, global poverty reduction, Xinjiang's medical industry, Australian hotels, nuclear power, Polish orchards and, not to restrict its reach, the entire world.**

trade and investment networks further expand and deepen.

The outward emphasis is a move away from the previous Chinese strategy of attracting inward foreign direct investment (FDI) to one through which domestic companies are encouraged to invest outwards (ODI). The nature of ODI is also changing dramatically.

OBOR expansion into such diverse trading nations has made clear to Beijing that Chinese groups would benefit from the technological edge and local knowledge of western counterparts. Partnering western corporations also gives credibility on the money markets.

But sound management will be the key. China needs to avoid its engagement with recipient countries becoming unbalanced, resulting in manufacturing exports crowding out domestic production and resulting in trade deficits that may lead to economic and/or political tension.

Curbed or not, China's acquisition-hungry conglomerates are still reported to be soaring in countries linked to OBOR, as elsewhere. Old habits die hard, and many economists believe that recent curbs on capital outflows will be reversed in the years ahead.

## How will the US respond to China's growing influence?

The US and China have made tentative moves towards greater co-operation on trade, and OBOR.

The trade deal announced earlier this year boosted the export market for US beef, and potentially for financial services and biotech products.

It is essentially a political agreement, addressing a subset of US-China trade issues, and springs from the 100-day plan to improve trade ties to which Presidents Trump and Xi agreed at their April summit.

This development comes at a time of heightened uncertainty in Asia over the US administration's commitment to the region in light of Trump's decision, on his second day in office, to pull out of the then 12-nation Trans Pacific Partnership which had been finalized by President Obama, after seven years of negotiations, as a core part of America's effort to update and expand rules for trade and investment in the Asia-Pacific.

Remaining countries are lobbying hard to maintain the deal which eased barriers and tariffs on \$356bn of trade last year alone.

The US has since made a major concession: recognition of OBOR, a move likely to be seen as signalling acceptance of one of the initiative's underlying strategic aims—to secure a greater leadership role for China in Asia.

In a sharp shift in US policy from the Obama era, Donald Trump has sent representatives to an OBOR forum, marking a possible new period of American support for Chinese political and economic power and greater participation among American firms in OBOR endeavours.

The US urged a transparent bidding process, and has said that American companies have "much to offer," and much profit to gain, from the OBOR programme. Construction, engineering, and finance firms are attempting to provide OBOR project with sophisticated

American goods and services.

Already, GE is providing equipment, while Honeywell has been selling natural gas processing equipment to countries in Central Asia.

While American firms can certainly benefit by providing necessary tools to building the new Silk Road, ultimately it is China that stands to gain from trade and business deals with OBOR countries.

As fuller US participation remains a major question, China will forge ahead as it demonstrated when the US Congress put up roadblocks to giving China its rightful role in the World Bank... by simply setting up its own Asian Infrastructure Investment Bank (AIIB).

Many countries, including western countries, made haste to support the AIIB. So with or without OBOR – these underlying trends are inexorable. OBOR is both a result of these trends and may well accelerate them.

## North America's Largest Tissue Industry Gathering is now back in Miami!

The largest tissue industry event in North America - Tissue World Miami is taking place at the Miami Beach Convention Center from March 21 - 23, 2018.

Don't miss out on the opportunity to meet and network with industry experts, key decision makers and fellow professionals from across the entire tissue value chain, ranging from finished product manufacturing, converting to machinery, suppliers, distribution and retailing.

Part of the international Tissue World portfolio established since 1993, Tissue World Miami is the 9th edition of Tissue World trade show and conference in North America, bringing over 200 exhibiting companies and 2500 visitors together on a biennial basis.



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## Sofidel Suppliers Sustainability Award sets global eco-friendly standard across tissue

Suzano, Valmet, LKW WALTER and Fibria are amongst the winners of Sofidel's second Suppliers Sustainability Award. Some 330 participants from 17 countries attended the event, held on 9 November at the magnificent East Wintergarden venue in Canary Wharf in the financial heart of London.

It awarded eco-friendly partners from across the group's global tissue supply chain that have distinguished themselves through their efforts towards environmental and social sustainability. Supported by the Italian Ministry for the Environment and Protection of Land and Sea, the award was created to encourage, spread and capitalise on best practice and improvement activity carried out by the group's suppliers each year.

Luigi Lazzareschi, chief executive of the Sofidel Group, said: "Promoting sustainable and responsible growth also means, within our vision, raising awareness and promoting the involvement of our partners so we can do more and do it better."

"We're convinced that building a sustainable future involves a widespread, common commitment, and a need to assume, each within their area and according to their role, new and broader responsibilities."

Sofidel's chief purchasing officer, Andrea Piazzolla, added: "The Sofidel Suppliers Sustainability Award is also designed to reduce risks, this includes the impact on Sofidel's, our product brands' and our stakeholders' reputations."

"Of course, the award is also a tool that aims to increase the competitive advantage for Sofidel and our suppliers."

The award is based on the Ten Principles ("TenP") – a Sustainable Supply Chain

Self-Assessment Platform conceived and promoted by the Global Compact Network Italy (GCNI) Foundation, of which Sofidel is a founding promoter member.

A tool to support self-evaluation of performance built on the TenP of the UN Global Compact, which, following the most relevant and up-to-date standards and conventions on sustainability, takes the areas of human rights, labour conditions, environmental protection and the fight against corruption into account, with the aim of identifying common challenges and solutions for improving the sustainability within the supply chain.

The winners were:

**THE BEST SUPPLIER AWARD:**  
**companies that have achieved the highest score according to the TenP platform. The award was given to Sofidel Group's top four supply channels.**

- Pulp Producers winner: Suzano Pulp and Paper Europe;
- Procurement & Purchasing winner: Valmet;
- Logistics Services winner: Kuehne + Nagel;
- Marketing & Sales winner: Vizeum Deutschland.

**THE BEST IMPROVER AWARD:**  
**companies that have made the greatest improvement to their results by undertaking new environmental and social sustainability procedures. Assigned to companies whose score on the TenP platform has increased significantly throughout**

**2017 after adopting specific procedures and/or measures in the area of social and/or environmental sustainability.**

- Pulp Producers winner: Zellstoff- und Papierfabrik Rosenthal;
- Procurement & Purchasing Category winner: Windsor Engineering (Hull);
- Logistics Services Category: LKW WALTER Internationale Transportorganisation.

**THE BEST SUSTAINABLE PROJECT:**  
**accolade for a company that has implemented a particularly important environmental and social responsibility initiative.**

**Large Enterprises Category (Social):**

Winner: Fibria International Trade for the project: "Fibria's key social project". The project stood out for its commitment and efficiency in supporting the development of local community, contributing to reduce poverty and economically and socially improving living conditions of people.

**Large Enterprises Category (Environmental)**

Winner: Skymark Packaging International for the project: "CLIPP+ Closed Loop Recycling System for Industrial Printed and Laminated Plastic Films using sc-CO2 technologies".

The project is an example of innovation, connected to circular economy for recycling and plastic reuse, introducing new technologies able to reduce the environmental impacts and to increase the production process efficiency.

Finalists: Semoflex and H.B. Fuller Company.

**Medium/Small Enterprises Category (Environmental)**

Dasara trasporti for the project: "Dasara Eco Power". The project improves the environmental impact of transport through the vehicle fleet renovation and by adopting particularly advanced standards such as liquefied natural gas fuel LNG.

**Medium/Small Enterprises Category (Social)**

Groupe SGP for the project: "The SGP Group: a liberated company or the redefinition of the functioning and rules of the company by its pairs". The project is based on an innovative model of organisation, which aims to develop



**Above:** "We're convinced that building a sustainable future involves a widespread, common commitment, and a need to assume, each within their area and according to their role, new and broader responsibilities." Luigi Lazzareschi, Sofidel Group chief executive

people, valuing their skills and their capability to proactively contribute to the achievement of business development objectives.

The evaluating Technical Committee is composed of the Global Compact Network Italy Foundation, the Sodalitas Foundation, SGS and WWF Italy.

### Guest speakers at the event

- Yachtswoman Ellen MacArthur, who has used her experiences sailing solo around the world to launch a foundation that inspires generations to re-think, re-design and build a positive future circular economy.
- Luciano Canova, a teacher of behavioural economics, who spoke about Nudge Theory and gave insights into how Sofidel is changing behaviour and influencing the sustainability habits of the tissue supply chain;
- Andrea Piazzolla, Sofidel chief purchasing officer, who described the method used to access suppliers and help them understand why they will be rewarded;
- Kirstin Akan-Brown, corporate partnerships manager at UK-headquartered NGO WaterAid, who underlined the importance of clean water.

The Sofidel Supplier Sustainability Award was held in collaboration with: Elettric 80, Fabio Perini, Södra, Henkel, A.Celli, Kemira (global partner); Industria Cartaria Pieretti, Pulsar (premium partner); Fondazione Ecosistemi (official partner); Touchwa.re (digital partner); Tissue World Magazine (media partner).

Sofidel's end goal is to end up with a ISO 20121-certified Awards event, or at least for it to be a Carbon Neutral event, with the 200 tonnes of CO<sub>2</sub> emitted compensated by Treedom trees.

The company said it is a key employer of sustainability as a strategic lever for development and growth, setting itself the goal of reducing its environmental impact to a minimum and maximising benefits for society.

To date, the group has reduced its direct CO<sub>2</sub> emissions by 19.1% (reduction in carbon intensity, 2009-2016) and limited its use of water within production processes (7.0 l/kg against a benchmark of 15-25 l/kg) and procures 100% cellulose certified by independent third parties certified with forest certification schemes.

The group is committed to achieving the 6th Sustainable Development Goal of the United Nations (ensuring access to water and sanitation for all) through collaboration with UK-headquartered NGO WaterAid.

WaterAid's mission is to bring drinking water and acceptable levels of sanitation to everyone, everywhere, by 2030.

The Sofidel Group is a leading manufacturer of paper for hygienic and domestic use worldwide.

Its first awards event was held last year in Lucca, Italy, when some 340 suppliers attended.

Established in 1966, Sofidel now has subsidiaries in 13 countries – Italy, Spain, the UK, France, Belgium, Germany, Sweden, Poland, Hungary, Greece, Romania, Turkey and the USA – with more than 5,800 employees.

Regin is its most well-known brand and other brands include: Softis, Le Trèfle, Sopalin, Nouvelle, Thirst Pockets, KittenSoft, Nalys, Cosynel, Yumy, Soft & Easy, Volare, Onda, Lycke, Forest, Nicky, Papernet.

The Sofidel Group is a member of the UN Global Compact and the international WWF Climate Savers programmes.

As announced at the 3SAWARD 2017, 330 trees have been planted, meaning the company received the ISO 20121 certification for the event.

## EUROPE

### Kurita Europe boosts WSA capabilities with acquisition

Kurita Europe has acquired a wet strength agent (WSA) production plant from Akzo Nobel in France. The acquisition boosts the Japanese-owned subsidiary's presence in the WSA market for tissue and speciality paper products in Europe. Based in Ambès, the site has a capacity of 25,000tpy. Kurita Europe is headquartered in Ludwigshafen, Germany, and supplies technologies for water, paper and process treatments. It is a subsidiary of Kurita Water Industries, headquartered in Tokyo, Japan.

## ARGENTINA

### Papeles Tissue Rosario boosts capacity

Papeles Tissue Rosario has increased its toilet roll and kitchen towel capacity after investing in a complete automatic converting and rewinding line. Supplied by the Amaco Group, the line was installed at the company's Rosario site where it will produce toilet paper and kitchen towels for the local tissue market. It has a width of 2,000mm and a fully servo motor control system with a double embossing unit and a lamination deco system. The machine can rewind and cut household and maxi-roll industrial rolls on the same line. It has a production capacity of around five tonnes every eight hours, which includes packaging with polyethylene plastic bags and automatic core-making machines. Production is expected to start-up in December 2017.

## BRAZIL

### Suzano reports strong 3Q operating results

Suzano Pulp & Paper has said its third quarter results show "a successful conclusion" to the projects that will prepare the company for the future.

It reported operating cash generation of R\$906m, increasing from R\$507m in the same time a year earlier. Adjusted EBITDA was R\$1.186bn, an increase of 54.5%, while for the three months of 2017 it recorded pulp and paper sales volumes of 3.5m tonnes.

Chief executive Walter Schalka said: "In addition to the strong operating and financial results, the quarter was marked by other important corporate advances." This includes the company being listed on the Novo Mercado segment of the São Paulo Stock Exchange. It also concluded the debottlenecking project at the Imperatriz Unit in Maranhão state, which increased the plant's annual production capacity to 1.65m tonnes, as well as the start-up of tissue production (sanitary papers) at the Mucuri Unit in Bahia state.

The entry into the tissue segment was accompanied by the creation of the Consumer Goods Department and the hiring of executives to lead the team.

"The quarter was marked by the successful conclusion of many important projects to prepare Suzano Pulp & Paper for the future," Schalka added. The company is the world's second largest eucalyptus pulp producer and Latin America's largest producer of printing and writing papers. It is a subsidiary of Suzano Holding and part of the Suzano Group.

It has five industrial units in Brazil, international offices in six countries and a global distribution structure ready to supply over 60 countries. In addition to pulp, Suzano produces coated and non-coated printing and writing and packaging paper, tissue paper, fluff pulp and Lignin.

## UK

**Accrol announces job losses amid operational review and profit warning**

Accrol Papers has confirmed the loss of 89 staff jobs at its UK tissue manufacturing sites.

In a statement the company said: "During the operational review currently being undertaken at Accrol Papers, it has been identified that a number of significant improvements should be made to the operational cost base of the business.

"As a result and with regret, the management has today announced a proposed reduction in headcount, totalling 89, across the business.

"A consultation process is underway, which will be concluded within 45 days." The company was unable to make any further comment as it is now in a consultation period.

Accrol is a supplier of branded and private label tissue paper products to major retailers in the household sector and to national distributors in the AfH sector.

It manufactures toilet paper, kitchen towels, facial tissues and AfH products from toilet tissue centre feeds to wiping rolls and hand towels.

In the past three years it has experienced rapid growth, including the opening of a new factory in Leyland and a warehouse and distribution centre in Skelmersdale. The business was founded in 1993 by Jawid Hussain and its brands include Softie, Triple Softie, Mega and Handy as well as several supermarket private label lines.

The company has also issued a profit warning and proposed placing to raise funds of £18 million.

Chairman Peter Cheung said: "The past few weeks have been extremely challenging for Accrol and its shareholders, as we navigated our way through industry-wide issues and sought a solution to the group's short-term funding problems.

"We believe that the business is through the worst and thank all our investors for their patience, during the period of suspension."

**Drenik ND has boosted its production capacity by 120tpd after it invested in a Crescent Former line. Supplied by Recard, the complete turnkey plant has a speed of 1,850mpm, a width of 2.8m, with two stock preparation lines for virgin fibres.**

**Accrol Papers has confirmed the loss of 89 staff jobs at its UK tissue manufacturing sites. It manufactures toilet paper, kitchen towels, facial tissues and AfH products from toilet tissue centre feeds to wiping rolls and hand towels.**

The company floated on AIM market in May 2016.

It blamed the profit warning on sudden increases in wood pulp prices and said hardwood pulp prices rose by almost 41% and softwood pulp prices by 14% between January to October 2017.

It said the pulp price rise was due to mill closures in China, longer than expected mill maintenance in Brazil, and increased Chinese demand.

## SPAIN

**Lucart Group boosts AfH capacity with Grupo CEL purchase**

Lucart Group is understood to have placed the winning bid for Spain's Grupo CEL Technologies & Systems SLU (CEL). The move will boost the company's

**Chemicals company Kemira has increased the prices of its coagulant and polymer products in Europe, the Middle East and Africa. The price increases came into effect on 1 January 2018, or as contracts allow.**

## GLOBAL

**Kemira announces price hike for EMEA**

Chemicals company Kemira has increased the prices of its coagulant and polymer products in Europe, the Middle East and Africa.

The price increases came into effect on 1 January 2018, or as contracts allow.

Kemira said they were necessary due to "overall significant and continued increases in costs of both freight and many key raw materials, where the supply-demand situation is challenging".

Coagulants: 11-13% for aluminium-based coagulants; 11-13% for iron sulphate based coagulants; 5-7% for iron chloride based coagulants.

Polymers: 8% for dry products; 9% for emulsions and other liquid polymers.

The company added: "Increases can be higher for specific product types in locations that are most acutely impacted by increased costs."

AfH presence in Spain and Portugal and include the acquisition of the manufacturer and converter's manufacturing assets.

The offer is for two tissue machines, the converting lines as well as the soap production line based in northern Spain, and is waiting to be approved by unions. Lucart Group is pursuing a strategy for growth on the AfH market in Europe.

The company was unable to comment further at this time.

**Körber announces new CFO**

Körber has appointed Stefan Kirschke as its chief financial officer.

With effect from 14 December, he succeeds Harald Vogelsang as group CFO.

Vogelsang left the Group on 14 December by mutual agreement, a premature release from his current contract, due to personal reasons.

Kirschke has held various leadership positions within the Körber Group. Most recently he served as CFO in the business area Körber Tissue.

His successor in the role of chief executive of the business area Körber Tissue will be Oswaldo Cruz.

Cruz joined Fabio Perini Brazil in 1994 as a sales manager and was appointed as managing director there in 2007.

Cruz, Markus Fröhlich (CFO) and Luca Frasnetti (CTO and COO as dual

responsibility) will form the new management team for the business area Körber Tissue.

The Business Area Körber Tissue includes the brands Fabio Perini, Casmatic and MTC.

## CHINA

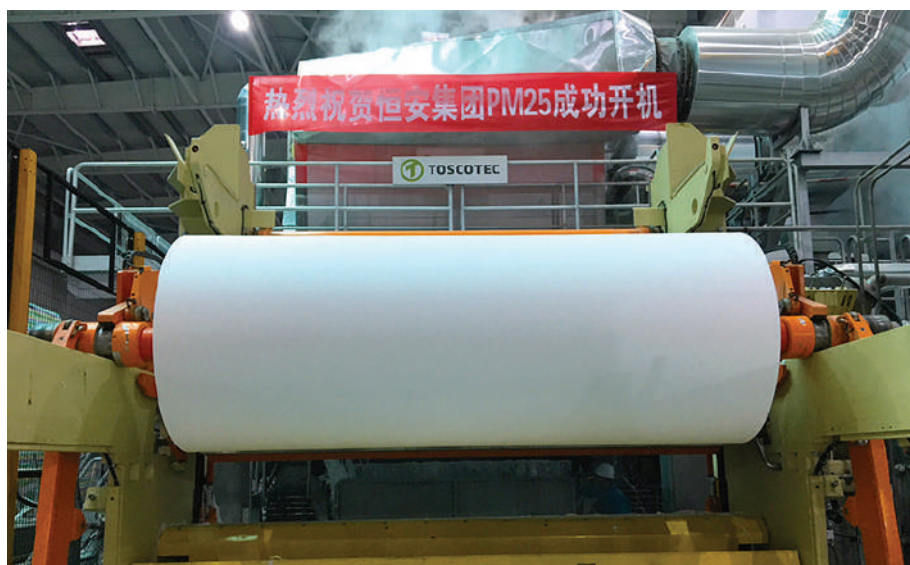
### Yibin Paper targets high quality tissue sector with TM investment

Yibin Paper Industry Co has invested in five high-speed tissue machines, each with a production capacity of 25,000tpy. Supplied by A.Celli Paper, the supply includes two new model iDEAL® lines with widths of 2.8m, speeds of 1,800m/min and 18' Steel Yankee Dryers, and three new model iDEAL® machines with widths of 2.8m, speeds of 1,800m/min and 16' Steel Yankee Dryers.

Both configurations will be equipped with steam hoods and the supply also includes the Approach Flow and various ancillary systems, as well as the control and automation systems.

Start-up is scheduled for the second half of 2018 and will boost the group's high quality paper production capacity. Yibin Paper produces and sells paper products in China, including tissue papers as well as paper cups and bamboo pulp boards.

It was founded in 1944 and is based in Yibin, China. It is part of the YIBO Group.



*Hengan enhances energies: the MODULO-PLUS ES is said to ensure low energy consumption*

### Hengan Paper expands with PM start-up

Xinjiang Hengan Paper has started up its MODULO-PLUS ES tissue line at its Changji-based mill.

Supplied by Toscotec, PM25 includes the TT DOES (Drying Optimisation for Energy Saving) solution, which the supplier said ensures enhanced production at low energy consumption.

The line will add 25,000tpy of high quality tissue to Hengan's current production.

### APP China invests in TM for Jiangsu

APP China is to invest 450 million yuan in a high-grade tissue manufacturing plant in Jiangsu.

The investment will be made at the Yunnan Xinping Nanan Sugar Paper site. DingChang Machinery is understood to be supplying two 2.8m Crescent Former tissue machines.

They will have a design speed of 650m/min and a working speed of 500 ~ 600m/min.



*Above: Yibin Paper targets high quality tissue with investments*

## China urged to 'Advance the Toilet Revolution Steadily'

A toilet – and therefore a tissue revolution – is underway in China.

Chinese president Xi Jinping has stressed the national imperative to upgrade China's toilets in order to build a more civilised society and improve the hygiene of the masses.

He launched the "toilet revolution" in 2015, initially aimed at building better bathrooms at tourist sites. But the latest campaign is also about improving the bathroom experience for the domestic populations.

Xi has encouraged officials to continue to modernise tourist bathrooms while expanding the push to rural homes. Many country loos are simple pit toilets and lack plumbing.

"The toilet issue is no small thing, it's an important aspect of building civilised cities and countryside," Xi said in a front-page article in the People's Daily, the Communist party mouthpiece. "This work must be a concrete part of advancing our country's revitalisation strategy and we must make great efforts to fill these shortcomings that affect the quality of life of the masses."

During Xi's visits to the countryside he has often checked on the loos in rural homes to see if residents use pit toilets. At an important Communist party meeting in November he said meeting the public's expectations for a better quality of life was the party's main challenge.

"There is still a yawning gap between China's strong economic development and people's standard of living. A beautiful environment and hygienic toilets are essential to a good standard," Bai Lin, China project manager with the World Toilet Organisation, told the South China Morning Post.

The National Tourism Administration announced plans to build and upgrade 64,000 toilets between 2018 and 2020 as part of a plan titled Advance the Toilet

Revolution Steadily. China's tourism industry has already upgraded 68,000 loos in the past three years, or about 19% of its target, as part of "universally welcomed" renovations, according to state news agency Xinhua.

While the United Nations declared 19 November World Toilet Day, Chinese authorities took that one step further, branding the event "World Toilet Day and China Toilet Revolution Awareness Day".

## POLAND

### Polmak diversifies into tissue production

Polmak has moved into tissue production after starting-up a tissue machine with a production capacity of 90tpd.

Based in Batorowo, Poznań, the company is a leading manufacturer of superior quality printed table napkins, decorative

**Polmak has moved into tissue production after starting-up a tissue machine with a production capacity of 90tpd. Based in Batorowo, Poznań, the company is a leading manufacturer of superior quality printed table napkins, decorative paper bags, paper plates and cups.**

## FRANCE

### Lucart boosts tissue production capacity

Lucart has started-up a tissue rewinder TT WIND-P at its facility in Laval sur Vologne.

Supplied by Toscotec, it features two unwind stands and handles parent rolls with a width of 2.9m, 2.6m diameter, at a maximum speed of 1,400mpm.

It is equipped with a slitting unit, automatic control of all unwinding and rewinding operations and sectional drive system.

This turnkey project includes Toscotec's proprietary automation and control system, which the supplier said "guarantees a significant increase in efficiency and productivity".

Lucart's history goes back to the 1930's when the Pasquini family set up a papermaking factory in Villa Basilica, Lucca.

Today the group's total production capacity is over 300,000tpy with 10 paper machines and 58 converting lines.

paper bags, paper plates and cups.

It has diversified into the tissue market after it purchased a Hergen-supplied EVO 12.

The machine started up in September and has a width of 2.8m, a design speed of 1,700m/min, and will produce tissue from 13g/m2 up to 30g/m2 from virgin pulp.

Scope of supply included a complete stock preparation equipment, approach flow, a EVO 12 Crescent Former unit, complete press section, Steel Ribbed Yankee dryer, Aerodry gas hood up to reel equipped with shaft puller and engineering.

The company purchased land in Itawa city to set up the green field mill.

## SERBIA

### Drenik increases capacity with TM investment

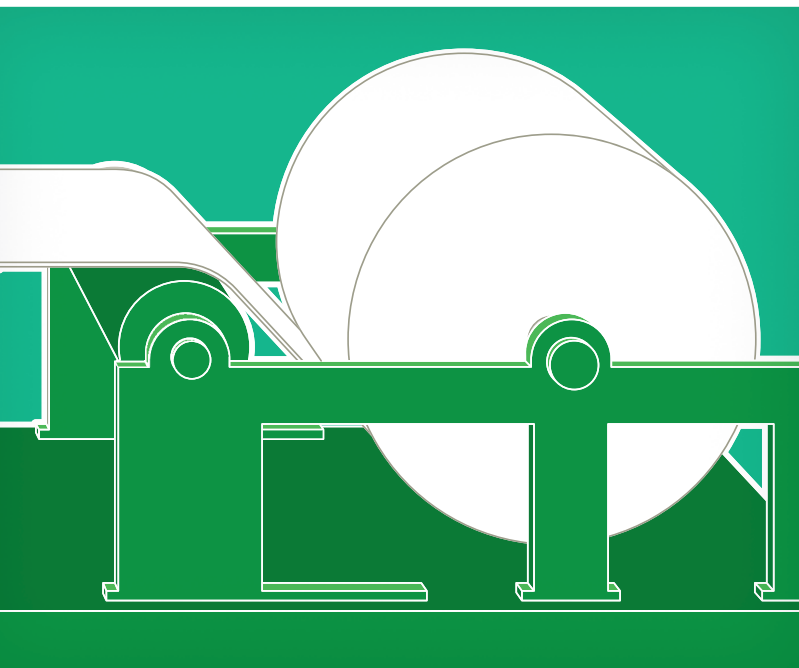
Drenik ND has boosted its production capacity by 120tpd after it invested in a Crescent Former line.

Supplied by Recard, the complete turnkey plant has a speed of 1,850mpm, a width of 2.8m, with two stock preparation lines for virgin fibres.

It is equipped with a hydraulic rewinder with four backstands, complete electrical plant, all ancillary equipment, DAF system, mist and dust extraction systems and hall and roof ventilation.

Drenik ND is headquartered in Belgrade and has a strong presence in the Serbian market and also in the Balkan and Eastern European territories.

**Chinese president Xi Jinping has stressed the national imperative to upgrade China's toilets in order to build a more civilised society and improve the hygiene of the masses. He launched the "toilet revolution" in 2015, initially aimed at building better bathrooms at tourist sites. But the latest campaign is also about improving the bathroom experience for the domestic populations.**



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**Buckman**



Investment following St. Croix Tissue's diversification into tissue in April 2016

## AMERICA

### St. Croix Tissue boosts production after diversifying into tissue

St. Croix Tissue has increased its tissue capacity after investing in a roll handling system and a rewinder.

Supplied by A.Celli Paper, the Maine-based company started-up the system at the end of October.

It started up its rewinder model AC882 in 2016 and it has since reached optimal speeds of 1,800mpm.

The investment follows the company's move into the tissue market in April 2016, when it started-up is one of two Andritz-supplied PrimeLine TMs.

It is owned by Hong Kong-based International Grand Investment Corp (IGIC) and produces paper napkins, paper towels, bathroom tissue and facial tissue for the local tissue market.

The facility is located next to sister company Woodland Pulp, which IGIC acquired from Domtar in 2010.

### Little Rapids boosts capacity with TM investment

Tissue and specialty paper manufacturer Little Rapids Corporation has started-up its XcelLine VTM 3 tissue line.

The Voith-supplied machine has replaced the company's old PM3 at its Shawano,

Wisconsin-based site.

Scope of supply included the XcelLine tissue paper machine and its auxiliary equipment (excluding the Yankee cylinder, which has been reused from the old machine), stock preparation and approach flow systems, a steam box, a gas hood, and a mist removal and dust reduction system.

The line has a production speed of more than 1,800 metres per minute.

Little Rapids Corporation was established by Charles Egan in 1947 and remains a family-owned business.

The company's core product lines serve the medical and beauty market segments, flexographic printing for packaging markets, tissue, MG paper, and wet crepe paper for the specialty paper market.

It has headquarters and manufacturing facilities in Green Bay as well as the paper manufacturing facility in Shawano, Wisconsin.

### GP focuses on AfH at Washington site amid restructure

Georgia-Pacific has said it will focus its Camas, Washington-based facility on AfH tissue products after announcing restructuring plans for the site.

The plant's communication papers and pulping operations will be shut down, impacting around 280 to 300 staff positions.

GP said the mill will remain an important asset for its AfH tissue business and the company will continue to operate and invest in the mill for its tissue manufacturing and converting capacity. During the next several months, teams will continue to operate the facility and begin to reduce production for communication papers with shut down of those assets expected in second quarter of 2018.

Mike Adams, president GP PRO and Communication Papers, said: "Economic impacts from the continuing decline in demand for communication papers make it necessary to discontinue operations for uncoated freesheet at Camas.

"Georgia-Pacific will continue manufacturing communication papers at our Port Hudson, Louisiana, facility.

"GP remains committed to being a consistent supplier to our communication papers customers on a national basis."

The company will be transitioning most of its customers currently served from Camas to Port Hudson over the coming months.

GP has already begun discussions with union leadership and salaried staff on how the process will work for staff affected by the communication papers shut down.

The company will now invest in Camas and approximately 120 to 140 employees will continue to operate the tissue assets and converting lines.

Based in Atlanta, GP and its subsidiaries

are a global leader in the manufacture and marketing of bath tissue, paper towels and napkins, tableware, paper-based packaging, office papers, cellulose, specialty fibres, nonwoven fabrics, building products and related chemicals. The company operates approximately 200 facilities and employs approximately 35,000 people directly.

### Clearwater Paper's 3Q results impacted by pulp price hikes

Clearwater Paper Corporation has said higher than expected pulp prices, maintenance costs and transportation rates have impacted its third quarter results.

The company reported net sales of \$426.5m, down 2.0% compared to \$435.3m for the same period a year earlier. EBITDA was \$31.3m compared to \$32.0m in 2016.

President and chief executive Linda K. Massman said: "We continued to focus on our long-term strategic plan to improve operating efficiencies and reduce expenses, resulting in the completion of two major strategic initiatives as part of a three-year strategic plan.

"Our third quarter results were impacted by higher than expected pulp prices, major maintenance repair costs, and transportation rates due to inclement weather caused by hurricanes in the Southeast."

In its consumer products segment, net sales were down 8.1% year-on-year to \$232.9m.

It said the decrease was due to lower parent roll sales resulting from the shutdown of two higher cost paper machines at the Neenah, Wisconsin mill at the end of 2016 and a 5.7%

decrease in retail tonnes sold in the third quarter of 2017.

Adjusted operating margin and Adjusted EBITDA for the segment decreased from 6.3% and \$30.9m, respectively, in the third quarter of 2016, to 4.4% and \$25.9m in the third quarter of 2017.

It said this was due to higher input costs for pulp, transportation due to weather related events and packaging supplies.

It recorded total tissue sales volumes of 90,502 tonnes for the quarter, a decrease of 10.0%.

Converted product cases shipped were down 7.6% to 12.7m.

The average tissue net selling prices increased 2.3% to \$2,574 per tonne in the third quarter of 2017, compared to the third quarter of 2016, due to improved product mix.

Clearwater Paper manufactures consumer tissue, AfH tissue, parent roll tissue, bleached paperboard and pulp.

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

### Resolute lawsuit against Greenpeace dismissed in court; manufacturer to continue legal action

Greenpeace International has won the latest round against Canadian manufacturer Resolute Forest Products in an ongoing defamation and racketeering case.

On 31 May 2016, Resolute filed a CAD\$300m lawsuit under the Racketeer Influenced and Corrupt Organisations Act in the United States District Court for Southern Georgia against Greenpeace International, Greenpeace, Greenpeace Fund and STAND.earth (formerly ForestEthics), as well as five individual staff members of these independent organisations.

Resolute has branded the advocacy group a "global fraud" in its complaint and said its customers have been scared off from doing business with the company "when Greenpeace spread false information", accusing the logger of "environmentally unsound forestry practices in Canada's evergreen Boreal Forest".

However, on 16 October a San Francisco federal judge dismissed all claims in the lawsuit and said Resolute can revise and refile its claims.

Greenpeace USA general counsel Tom Wetterer said: "This is very positive news for all of us, for the values that we share,

and for Canada's Boreal Forest.

"The logging company's allegations were a clear attempt to silence the voices that advocate for the environment."

Resolute's lead US counsel Michael J. Bowe said: "The court dismissed the complaint for failure to allege certain elements of our claims with sufficient detail and it provided Resolute with leave to correct those purported deficiencies in an amendment.

"We will correct those purported deficiencies in an amendment and proceed with the case."

Greenpeace and Resolute are involved in two lawsuits – in 2013, the manufacturer filed a CAD\$7m defamation case against Greenpeace Canada and two staff members in Ontario, which is still pending.

A spokesman for Resolute told TWM: "On the Canadian front, our separate and distinct case against Greenpeace continues to progress.

"This case addresses both defamation and intentional interference with commercial relations.

"After years of delay tactics by Greenpeace, they are required to produce discovery by mid-December.

"In terms of the Canadian action, the amount claimed will be revised as discovery proceeds."

## SOUTH AFRICA

### Correll Tissue boosts capacity with TM rebuild

Correll Tissue has started-up its PM1 after a rebuild undertaken by supplier Toscotec. The scope of supply included a modification of the existing Fourdrinier tissue machine into a MODULO Crescent Former with a new TT Headbox-SLT.

Delivery also included a rebuild of the existing approach flow system and of the felt run, as well as the YD doctoring system. The rebuild has boosted the Durban-based machine's speed to 650mpm.

It will produce high-quality tissue, mainly from waste paper, produced by the printing operations of parent company Novus Holding.

Conrad Rademeyer, group executive, said: "We are now ready to deal with new market challenges and we are looking forward to achieve great and new results in terms of productivity as well as in terms of machine performance.

"The new machine will give us the flexibility we need to get a competitive advantage in the market."



"Our third quarter results were impacted by higher than expected pulp prices,"

Clearwater president and chief executive  
Linda K. Massman

## Tissue World First – the new look Miami showcase is set to win business gold

It's TW's 25th anniversary in 2018 and TW Miami looks set to raise the bar again.

As the top tissue companies innovate to stay ahead of the game... so too Tissue World.

Already the industry's leading provider of global exhibitions, conferences and magazine and online news and analysis, we have responded to changing market dynamics and substantially revamped our Miami conference and trade show. The theme will set the tone - "When Best in Class isn't good enough: Identifying hidden dynamics to optimise business performance."

The aim is simple - to provide the leading and aspiring executives with the most up-to-date information that will help guide and navigate the ever-changing business landscape... and to make that crucial deal.

As TWM went to print, we can confirm the event will host 40+ speakers and 300+ attendees, whilst conference content will reflect on our 15 years' experience in North America to bring a complete package of business insider information.

It will all happen alongside our impressive 200-company strong exhibition in Miami Beach Convention Center between 20 - 23 March 2018 (the trade show will take place during 21 - 23 March).

Tissue World is approaching its 25th anniversary in 2018... so in Miami we have every reason to put on a great show. Key topics will include:

- Understanding interdependencies; we compare expertise from our mature industry with fast moving trends influencing the wider economy;
- A 'Business and Management Day' will take delegates through multiple levels of learning – navigating our way through from broad global trade and consumer trends through the sourcing and production chain to retail;

- A combination of thought-provoking presentations and deep-dive interactive sessions will give new perspectives and the opportunity to dig into the most challenging issues and most exciting opportunities;
- During the 'Technical Sessions' new ideas on product quality, operational efficiency and Industry 4.0 will be gained;
- Solutions emerged from continuous improvements will form the 'Yankee Operations Workshop';
- As the leading event series in the tissue industry for 25 years, Tissue World provides a hub for this knowledge generation and transfer;
- Topics will cover key subjects affecting businesses from the macro level to the technical level;
- Deep dive sessions with Q&A's to go deeper into the topics.

**Advisory Board:** The Tissue World Advisory Board is compiled from industry experts who will work with the Tissue World Miami team to ensure the quality and relevance of the conference content by providing guidance and expertise.

They are: Patrick Boateng, leader - global sourcing, The Kroger Co., USA; Mario A. García Franco, president, Fábrica de Papel, San Francisco, S.A. de C.V., Mexico; Steve Edwards, founder, Edventures LLC, USA; Lairton Goulart Leonardi, managing director, Solvo Consulting, Brazil; and John Holton, application engineer, BTG Americas Inc., USA.

Keynote speakers so far include: Suzanne Blanchet, strategic advisor, Canada; Rodger Baker, vice president of strategic analysis, Stratfor, USA; Esko Uutela, principal, RISI, Germany; Patrick Boateng, leader - global sourcing, The Kroger Co., USA; Jordan Rost, VP,

consumer insights Nielsen, USA.

Talk topics include: A New NAFTA: What's Next?... China's Industrial Strategy: Outlook and Implications... Tackling Water Scarcity with Big Data... Supply Side Dynamics... Consumer Trends Update... Today's Retail Realities: What Does It Take to Compete?... Deep Dive: Sourcing and Supply Chain Impacts... Deep Dive: Big Data, Big Impacts?... Technical Session: Product quality improvements... Technical Session: Converting: Improvements and optimisation... Technical Session: Sustainability, regulatory and best practices.

The first edition of Tissue World in Miami was launched in 2002 and since then we have been the leading provider of the whole trade show format, attracting key exhibiting delegates to our show floor and key speakers to our conferences.

Tissue World is the only global trade show offering you a platform to do business across all aspects of your day-to-day business life.

The event will also host the Tissue World Miami Gala Dinner on 21 March, where we will also host the Tissue World Magazine Mill Awards and Most Sustainable Exhibitor Award Winners event.

The Miami exhibition is part of the international tissue industry portfolio Tissue World, established in 1993.

Tissue World's presence includes Americas, Europe, Middle East and Asia, as well as Tissue World Magazine, the leading independent news provider for the global tissue business.

Take advantage of the Early Bird rates and register before 15 February 2018 - go to

[www.tissueworld.com/register](http://www.tissueworld.com/register) or email [info@tissueworld.com](mailto:info@tissueworld.com).

*We look forward to seeing you in March!*

## BANGLADESH

### Bashundhara paper mill boosts capacity

Bashundhara Paper Mill has invested in two slitter rewinders.

Supplied by Tecno Paper, the model TP-2US-TRH15 Top Performance rewinders will have a trim width of 2.8m and includes two unwind stands for the parent reels.

The control system includes a DCS for handling all the functions of the rewriter and for communication with the mill main DCS.

Each rewriter is complete with trim removal system, stopper, conveyor belt

and wrapping machine.

Bashundhara Paper Mill is part of the Bashundhara Group. It was established in 1993 and now has four paper mills which produces tissue and paper products for the Bangladeshi market.

# Northern USA: Where are you on the axis of survival?

*With the constantly changing habits of US consumers continuing to challenge tissue companies across America's tissue belt, being fit for purpose is more crucial than ever.*

**W**hat a difference a few degrees of latitude make. This issue of TWM focuses on northern USA so we'll see what a profile of the region reveals. Within that narrow band of just 14 degrees of latitude, there's a wealth of diversity in the tissue and towel (T&T) segment.

We hope this short tour of that diversity will inspire you to heed the advice of Bruce Henderson, founder of the Boston Consulting Group, who said that the only three important things to do in business are to "segment, segment, and segment."

First, notice that T&T production is grouped geographically with a cluster in the northeast, a tight cluster in Wisconsin and another in Washington/Oregon States on the West Coast (Figure 1). Another way to see the clustering is shown in Figure 2 which reveals the northern region's production capacity.

Profiling T&T production in those northern USA mills, we can see that two companies dominate with close to half of total capacity (Figure 3). Figure 4 details their mix of finished products.

The inhabitants of each geographic cluster differ from their peers (Figure 5). For example, those in the west, Canada, and the northeast use mainly chemical furnishes whereas mills in the midwest

**T&T Mills in Northern U.S. Are Clustered in Three Areas**



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Source: FisherSolve™

**Fisher**  
INTERNATIONAL

**Figure 1**

produce a sheet using a high recycled content.

Machine size also matters. The average T&T production of USA machines is considerably higher in the west than the other regions (Figure 6).

A part of the reason for the west's higher production rate is its machine efficiency. Figure 7 measures T&T machine efficiency, showing the average tonnes per inch delivered by machines in each area of the northern USA and Canada.

**C F**

**Bill Burns**

*Senior consultant,  
Fisher International*

The more efficient (USA west) averages about 50% more productivity than the least efficient.

Mills in northern USA also vary considerably in their competitiveness and staying power. As American consumer buying habits continue to change and new entrants build more capacity for making structured sheets, competitiveness will matter even more.

Less efficient conventional machines will experience increasing pressure and some will close. Figure 8, taken from FisherSolve™ Viability Benchmarking, shows which ones those are likely to be.

**Mills in northern USA also vary considerably in their competitiveness and staying power. As American consumer buying habits continue to change and new entrants build more capacity for making structured sheets, competitiveness will matter even more.**

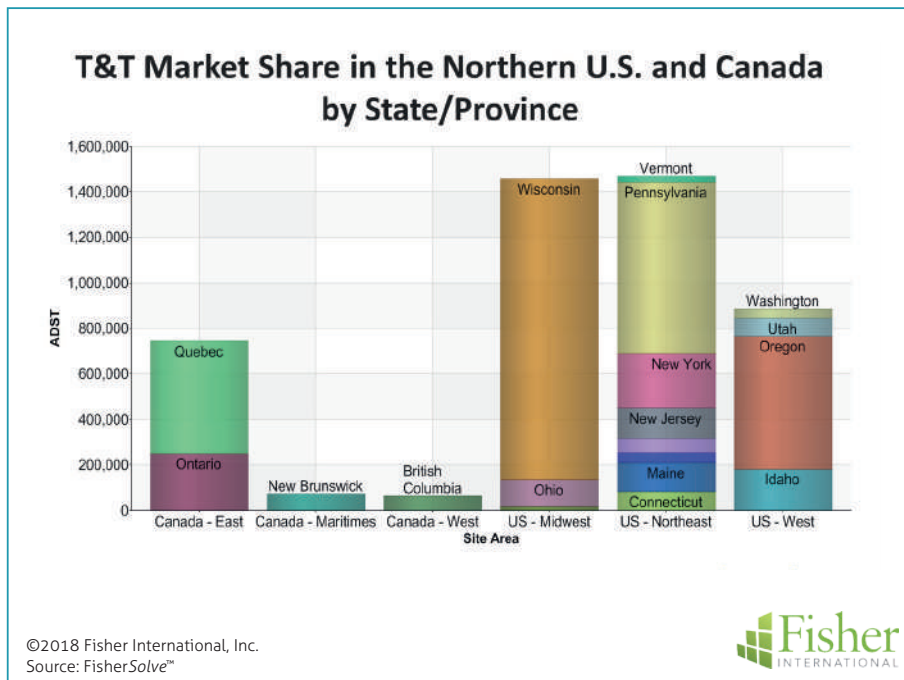


Figure 2

In the upper left-hand quadrant, you can see a large number of assets that fare poorly in both short- and long-term competitiveness. They are the ones most likely to close as the segment changes.

Northern USA also differs from other regions in the types of products they make. For instance, Figure 9 shows that capacity in the midwest is much more focused on AfH (commercial) products than consumer grades, unlike the Northern USA and other areas of the country.

Broken out by region, Figure 10 shows that the northeast makes more "Ultra" quality tissue using advanced technologies like TAD, NTT, and Atmos than other areas. The pressure on conventional machines can be seen with the growth of Advanced T&T technology represented by the light-green stacks in Figure 11.

The northeast makes more "Ultra" quality tissue using TAD, NTT, and Atmos technologies than other areas.

Northern USA also differs from other regions in the types of products they make... capacity in the midwest is much more focused on AfH (commercial) products than consumer grades, unlike the Northern USA and other areas of the country.

On the x-axis, you see a measure of short-term competitiveness which is made up of cost and machine efficiency metrics. On the y-axis, there are several measures of long-term viability – for example, capital requirements, technical age, size, and other factors that are hard to change without substantial capital investment.

We've already seen considerable turnover in T&T assets in the region. Figure 12 shows a net decline in its capacity since 2007, albeit in fits and starts. Those represent older assets being replaced by newer assets capable of making products and qualities the demand for which is growing.

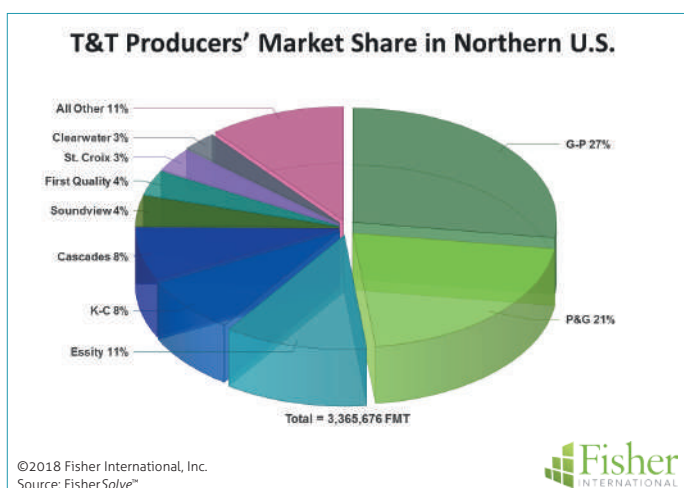


Figure 3

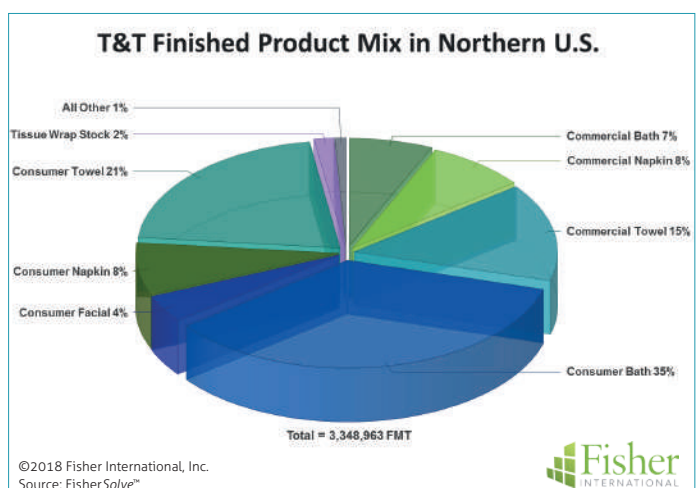
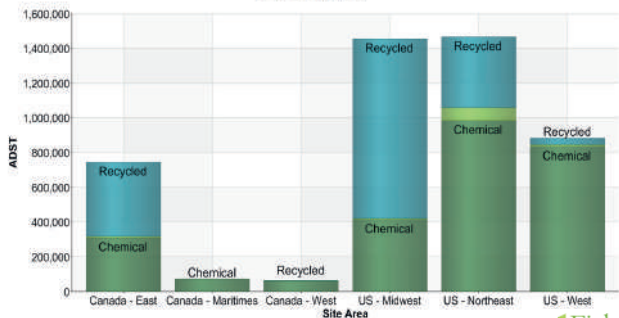


Figure 4

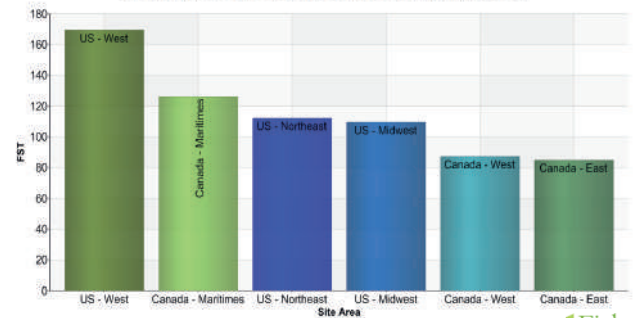
### T&T Furnish Content in Northern U.S. and Canada by Region



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Source: FisherSolve™

Figure 5

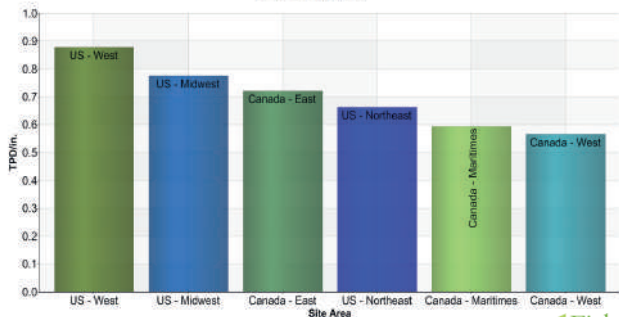
### Average Daily Production of T&T Machines in Northern U.S. and Canada by Region



©2018 Fisher International, Inc.  
Source: FisherSolve™

Figure 6

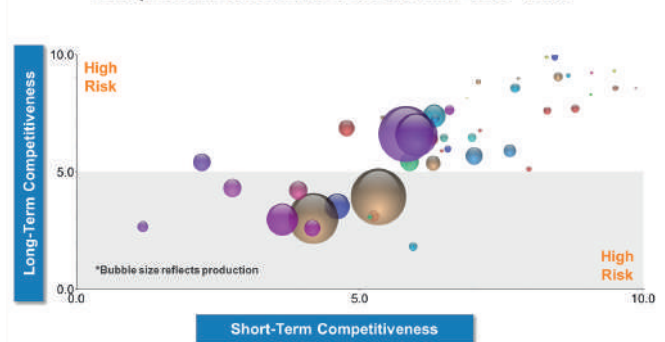
### T&T Machine Efficiency in Northern U.S. and Canada by Region



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Source: FisherSolve™

Figure 7

### Competitiveness of Northern U.S. T&T Mills

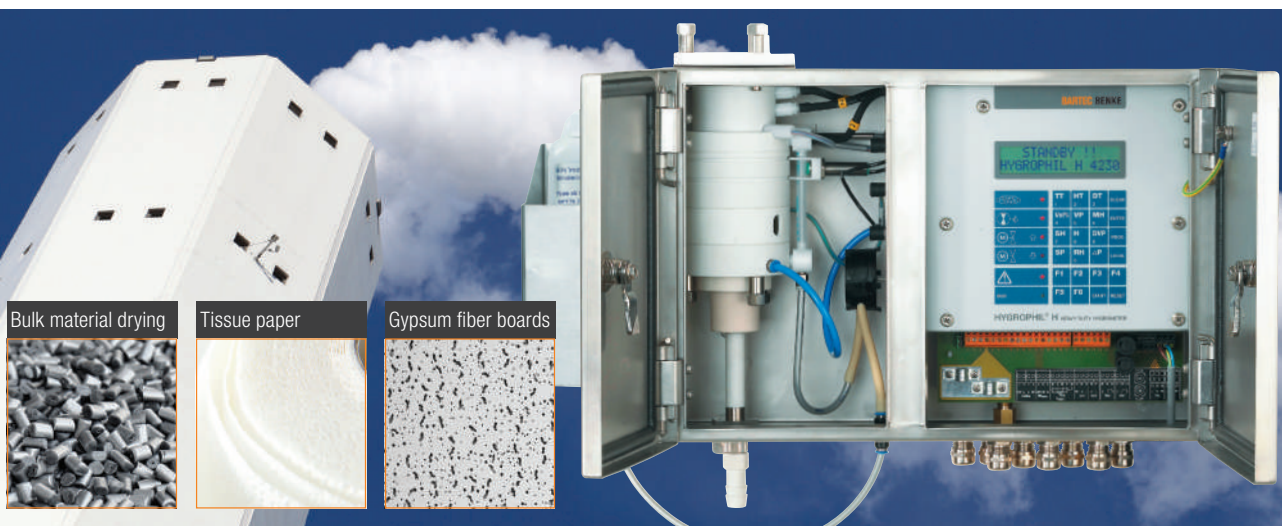


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Figure 8

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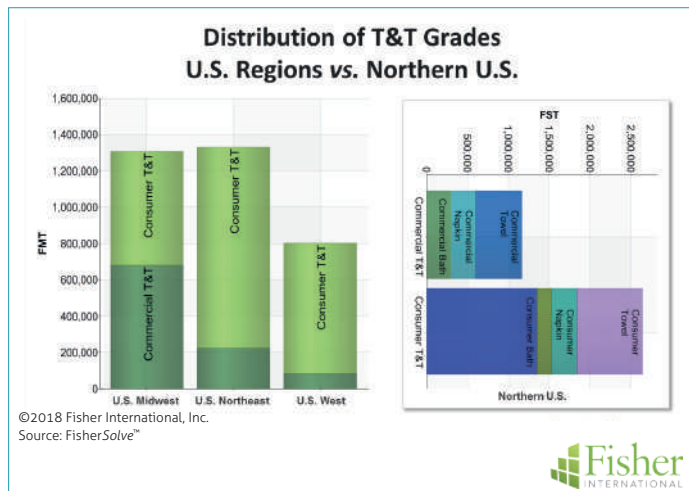


Figure 9

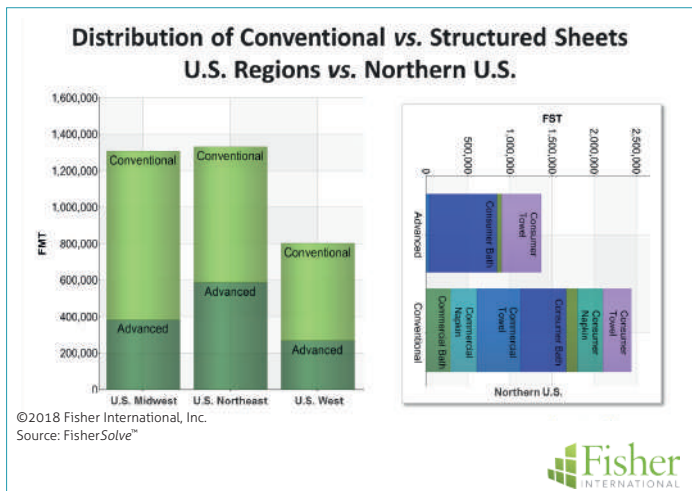


Figure 10

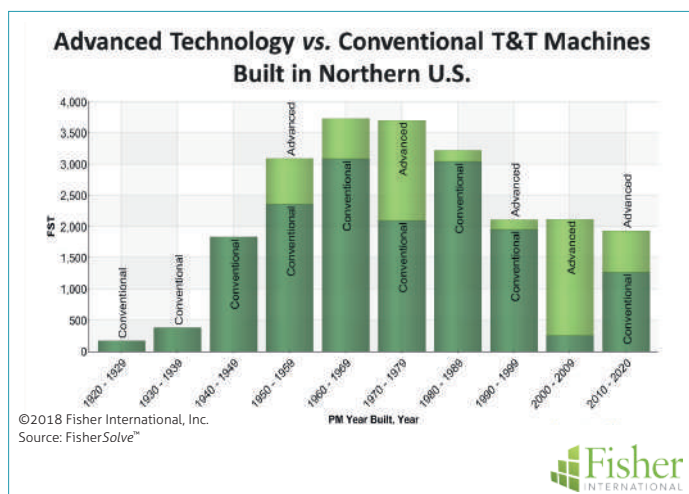


Figure 11

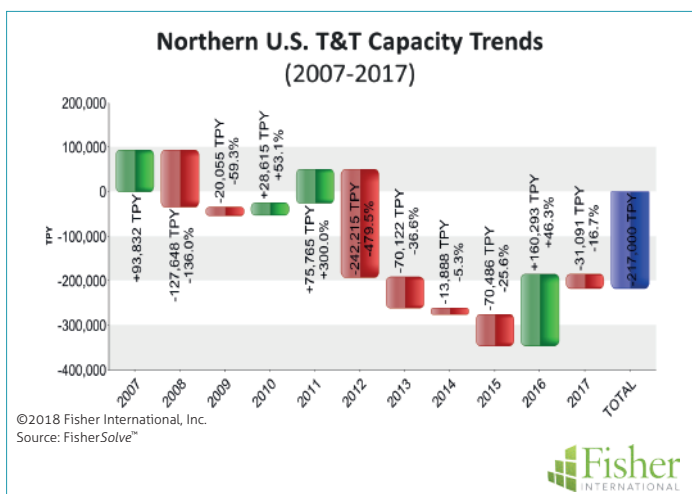


Figure 12

**Northern US  
marketshare: G-P 27%,  
P&G 21%, Essay 11%,  
K-C 8%, Cascades 8%,  
Soundview 4%, First  
Quality 4%, St. Croix 3%,  
Clearwater 3%,  
All other 11%.**

We hope this short survey has convinced you that, even in limited geographies, there are big differences between assets and enough turbulence in the base of capacity, with important competitive advantages to be had from understanding them through an active use of business intelligence.

**Even in limited geographies, there are big differences between assets and enough turbulence in the base of capacity, with important competitive advantages to be had from understanding them through an active use of business intelligence.**

The source for market data and analysis in this article is FisherSolve™.

**About Fisher International, Inc.**  
Fisher International supports the pulp and paper industry with business intelligence and strategy consulting. Fisher International's rich databases, powerful analytics, and expert consultants are indispensable resources to the industry's producers, suppliers, investors, and buyers worldwide. FisherSolve™ is the pulp and paper industry's premier business intelligence resource. Complete and accurate, FisherSolve is unique in describing the assets and operations of every mill in the world (making 50 TPD or

more), modeling the mass-energy balance of each, analysing their production costs, predicting their economic viability, and providing a wealth of information necessary for strategic planning and implementation. FisherSolve is a product of Fisher International, Inc. For more information visit: [www.fisheri.com](http://www.fisheri.com) or email [info@fisheri.com](mailto:info@fisheri.com) USA: +1-203-854-5390

# US tissue: mature demand, highly competitive landscape and future growth opportunities

**W**ith 21kg per capita total tissue consumption in 2016, the US is one of the most saturated tissue markets in the world. Total demand for consumer and AfH tissue is expected to grow by less than 1% per year from 2016 to 2021. In a market that is already highly developed, demand is thus largely driven by fundamentals such as growth in GDP and population growth.

GDP per capita amounted to USD57,442 in 2016 and is expected to grow at an average annual rate of 1.1% over the next 10 years. In addition to modest GDP growth, annual population growth in the US remains below 1% and is expected to slow down even further in the next 10 years. The slow rate of growth in both GDP and the population, along

with the maturity of the US market, will continue to play a role in shaping the demand for tissue products, and, in turn, how manufacturers are responding in terms of product development and pricing strategies.

## Consumer tissue prices driven down by the competition

The consumer tissue market is experiencing fierce competition between brands and private label, as well as amongst product categories and retailers,

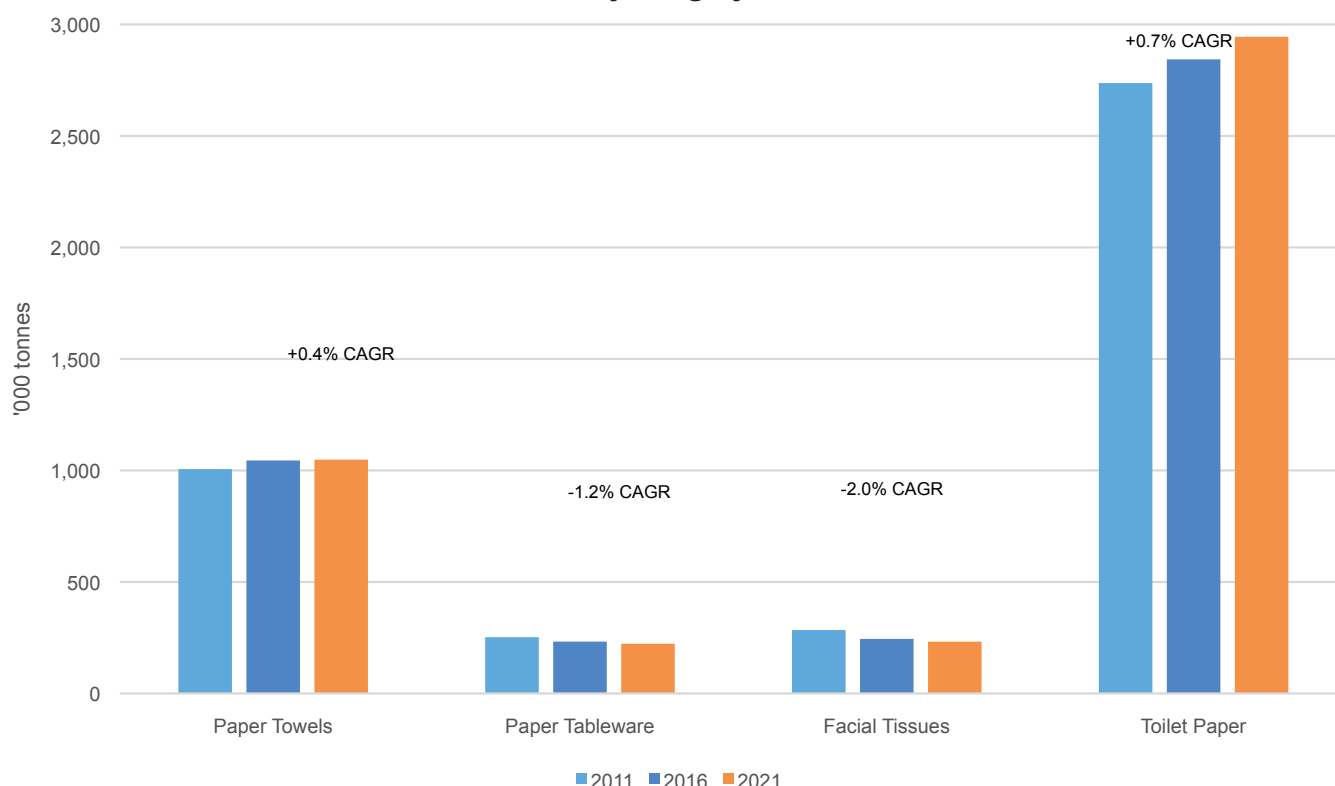


Siana Jannesari

Analyst – tissue & hygiene,  
Euromonitor International

**The slow rate of growth in both GDP and the population, along with the maturity of the US market, will continue to play a role in shaping the demand for tissue products.**

US Retail Volume by Category, 2011/2016/2021



leading to continuing pressure on prices. Over the period 2016 to 2021, the average unit price in retail tissue in the US is expected to decline by a CAGR of 0.5%, excluding inflationary effects. The combination of a saturated market and slowing population growth has created an environment in which branded and private label products must compete for a share of a pie that is not getting any bigger, while promotional activities and discounts remain rampant.

Not only is there competition between brands, but also between product types within consumer tissue. For example, facial tissues and paper napkins face increased competitive pressure from products that provide more cost-effective solutions to the everyday needs of price-conscious Americans; such as the use of toilet paper in place of facial tissues.

Competition in retailing also has a negative impact on consumer tissue prices. As retailers compete and aim to make the most out of their shelf space, they force tissue manufacturers to comply. An example of a retailer putting pressure on tissue manufacturers include in early 2017, when Walmart demanded its vendors reduce the prices they charged to the retailer by 15%. Similarly, Target announced in September 2017 that it was cutting prices on thousands of items, including paper towels and toilet paper, in an effort to remain competitive after Amazon's acquisition of Whole Foods.

The competition in retailing is being further intensified by the growth of private label and the rise of discounters. With improvements in technology, private label tissue products have seen an increase in quality and a widening of the product range; becoming a more popular choice among US consumers.

**While opportunities exist to drive category growth through moist toilet wipes, pricing remains a challenge and a limitation on value growth, as wipes is one of the most price-sensitive categories in retail hygiene.**

### **The combination of a saturated market and slowing population growth has created an environment in which branded and private label products must compete for a share of a pie that is not getting any bigger,**

At Costco, for example, private label toilet paper is one of the most popular stock keeping units. The high growth prospects for private label are supported by the rise of discounters in the US, particularly the expansion of Lidl and Aldi, which combined are seeking to open hundreds of outlets in the US in the coming years. Lidl has plans for 100 additional stores by mid-2018, and Aldi announced an investment of USD3.4 billion in store expansion, to open an additional 900 outlets. This puts further pricing pressure on retailers, while providing private label with a wider platform for growth.

### **Meaningful innovation to grow sales and profit margins**

As volume growth slows down in the US market due to saturation and demographic challenges, innovation has become key to driving further value growth. However, there is a price ceiling that US consumers are willing to pay for tissue products, even with value-added innovation. The key is to create product innovations that offer tangible and meaningful benefits, offering a unique solution for consumers, as opposed to yet another ultra-soft or ultra-strong tissue.

Better All Around, a UK company, has been successful with its Ora paper towels brand, which was launched in the US in 2016. Success among US consumers was due to the unique format and additional benefits. Users of Ora paper towels enjoy the fact that the sheets do not need to be torn, they

can be used as a snack bowl due to their conical shape, and the product looks elegant in a guest bathroom. The brand has so far only been available at Target.com and selected Target stores in the US. However, the initial stock sold out quickly, despite a higher price point compared with other brands and private label, and customer reviews were very positive.

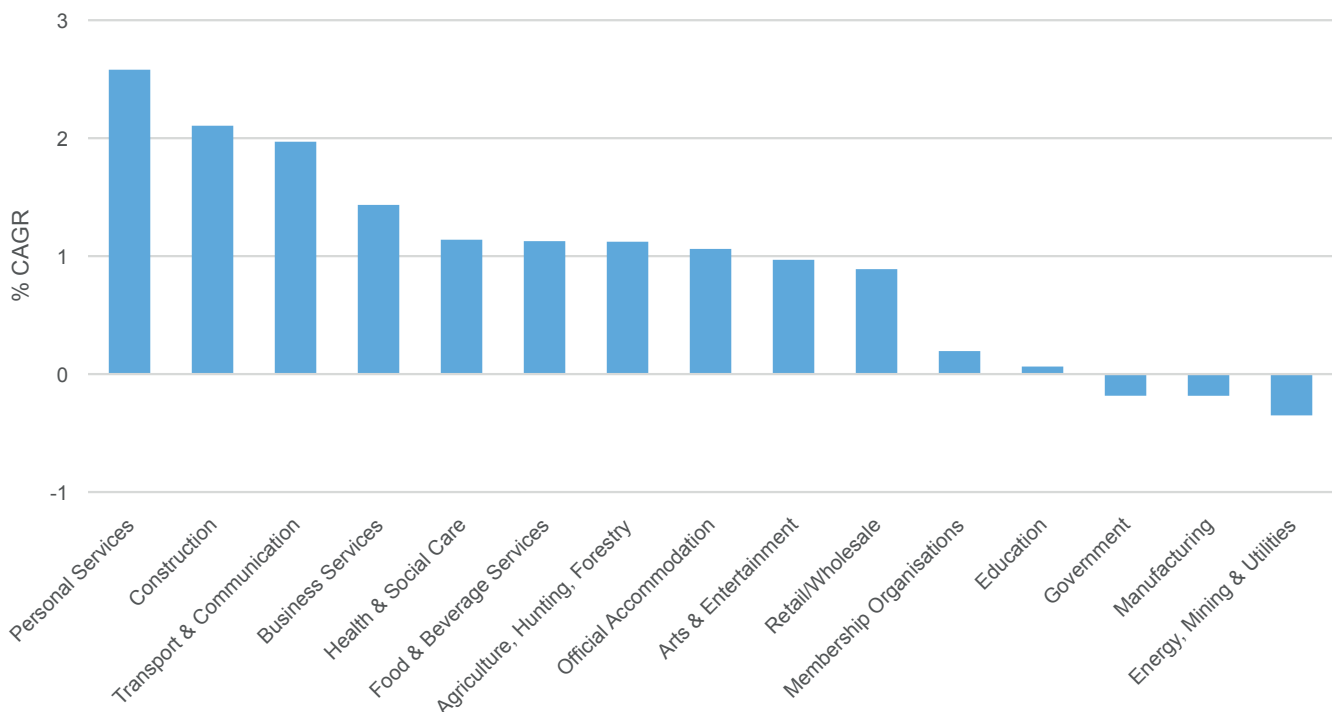
### **Moist toilet wipes offers opportunities, but high price is an issue for wider adoption**

Within consumer tissue, moist toilet wipes provides a value-added opportunity for the industry. The category recently experienced significant growth; far outpacing the growth of dry toilet paper. This was due to a multitude of factors, such as promotional activity, increased visibility on store shelves and higher awareness. This helped shift adult users away from baby wipes and towards moist toilet wipes. Moist toilet wipes is expected see higher growth rates compared with dry consumer tissue categories. While opportunities exist to drive category growth through moist toilet wipes, pricing remains a challenge and a limitation on value growth, as wipes is one of the most price-sensitive categories in retail hygiene.

### **Shifts in institutional channels impact AfH tissue**

AfH tissue in the US is expected to see a flat performance in volume terms over 2016 to 2021, growing by a CAGR of less than 1%. Challenges in the AfH market have arisen from two major shifts in US institutional channels: budget cuts at many public institutions, and the move towards more automation in certain industries. Budget cuts have a twofold effect on decreasing demand

Growth in Number of Employees by Industry Sector in US, 2016-2021



for AfH tissue products. Smaller budgets force institutions to cut both their spending on tissue products and their total headcount, lowering the number of users of tissue products. President Trump's budget plan for FY2018 includes major cuts to education, energy and healthcare. These sectors are forecast to see limited or negative growth in the number of employees over the next few years, which will negatively impact sales in AfH tissue.

The rise in automation will also have a negative impact on the number of employees in several sectors, decreasing the number of AfH tissue users, as the use of technology and robotics replaces human labour. While the growth in automation is most prevalent in the manufacturing industry, the use of robotics is also increasing in other industries, such as agriculture, logistics and education.

### AfH opportunities in the hotel industry

Profit margins are typically low for manufacturers of AfH tissue products, as price is the most important factor in the purchasing decision, since the decision-

maker is not typically the end-user. One area in which this is not the case is in industries that are focused on service and the guest experience – for example, in luxury hotels.

The good news for AfH tissue in the US is that the hotel industry is expected to grow. The number of hotels in the US grew by 2% from 2016 to 2017, with a majority of this growth coming from the luxury (3%) and mid-market (3%) segments. Budget and unrated hotels grew at slower rates – 1% each. This growth pattern is expected to continue over the next few years, with more than 1,000 additional luxury hotels and over 2,000 additional mid-market hotels in the US expected through to 2022. The growth in higher-end hotels is positive news for AfH tissue, especially for more premium products.

### Capacity additions and oversupply – cost efficiencies are key to survival

The US market continues to see investment in tissue production facilities aimed at increasing production for domestic consumption, particularly premium and ultra-premium products.

This has led to a scenario where tissue capacity in the market far exceeds current and future demand for tissue products. The US market saw demand of nearly seven million tonnes in 2016, but is expected to absorb just 36,000 additional tonnes over the three years between 2017 and 2019. With several projects in the pipeline, and each expected to add at least 60,000 tonnes per year to the market, there is a clear imbalance in supply and demand.

This oversupply will only lead to further competition. Manufacturers in the industry must be strategic with their investment decisions and find growth segments within the market to absorb this additional capacity. Potential options include the hotel industry, as well as private label. Looking outside the US to higher-growth markets is also an option. With downwards pressure on prices, oversupply, and slow growth expected in the US, due to unfavourable demographic conditions, tissue manufacturers that can find cost efficiencies and offer US consumers high-value products at a low price will fare well in the market.

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Istanbul, Turkey

### TISSUE WORLD

Milan

25 - 27 March 2019  
Fieramilanocity Hall 3  
Milan, Italy

### TISSUE WORLD

São Paulo

September 2019  
Transamerica Expo Center (Hall E)  
São Paulo, Brazil

### TISSUE WORLD

Bangkok

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BITEC  
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### ASIAN PAPER

Bangkok

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**NEW ADDITION:** In an exciting recent development, Tissue World is pleased to announce Tissue World Bangkok, held alongside Asian Paper Bangkok, the longest running event serving the paper, pulp, packaging, print and corrugated industries.

Offering global benefits to the entire chain of paper, paper-related and tissue industries, Tissue World and Asian Paper Bangkok 2018 will be the only meeting point serving Asia and the entire ASEAN markets for industry professionals to network, do business and learn!

# TWM

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Organised by



By Tissue World Senior Editor Helen Morris

# On the offensive for a place in the Big League

***Having touched-down in the Green Bay home of the famous NFL stars the Packers, Italian giant Sofidel plans to shoot the gap with a spread offense in a bid to establish itself amongst the big boys. A TWM report (with apologies for any tactical blunders).***

Everyone told TWM beforehand that the flight and approach to Sofidel America's Green Bay converting plant can be pretty magnificent. Based around the tributary Fox River, the city is a sub-basin of Lake Michigan, which is one of five interconnected lakes that make up the Great Lakes region. Nicknamed the 'Third Coast', by total area they form the largest group of freshwater lakes on earth.

Among all these claims to fame, the Wisconsin city is also known as one of the tissue capitals of the world, and today is home to mills including Kimberly-Clark, Procter & Gamble

and Georgia-Pacific, as well as local independents such as Little Rapids and ST Paper, who along with a variety of the market's suppliers all have plants within throwing distance of each other.

**Helen Morris**

Senior Editor,  
Tissue World magazine

**The Wisconsin city is also known as one of the tissue capitals of the world, and today is home to mills including Kimberly-Clark, Procter & Gamble and Georgia-Pacific, as well as local independents such as Little Rapids and ST Paper, who along with a variety of the market's suppliers all have plants within throwing distance of each other.**



**Sofidel Green Bay:** converting 70,000tpy, the site is the company's largest converting facility globally

Also hugely resonant of the Green Bay name are the famous and serially successful Green Bay Packers. Uniquely, the 13-time National Champion American football team is still a cooperative, and surges forth from the smallest city in America to host an NFL team.

On touching down at Austin Straubel Airport however, the city is engulfed in a ferocious and freezing snow blizzard which renders any sight of the river, lake, tissue mills or the Packers' Lambeau Field stadium somewhere between unlikely and impossible.

Thankfully, a mere 12 hours later and we're driving in sunshine along well-ploughed roads still banked high with snow to Sofidel America's site. TWM meets operations manager Stefano Giannini, originally from Lucca (and now a converted Packers fan), and Frank Law, SVP marketing and sales, who is originally from Blackpool, UK, and now based at the company's HQ in Philadelphia (a converted Philadelphia Eagles fan, but still, every credit for his loyalty, primarily a fan of the somewhat less successful Blackpool FC of the 3rd tier of English football).

Both are affable and well informed, and equally bemused by the extremity of the weather and admiring of the efficient way the locals get on with it. Having acquired the plant from independent converting company Green Bay Converting (GBC) in November 2015, it was then realigned to focus just on tissue, offering converting facilities and broadening the Sofidel Group's presence across America.

For now, it is the company's largest converting facility globally converting 70,000tpy. The Green Bay site supplies private label retail products, converting bathroom, tissue, and roll configurations to service retail customers, including the addition of printed colours which are used as a selling point for private

**It's been a steep learning curve in terms of adapting their European work strategy and culture to fit America's: "We proudly fly our American flag outside our company building, but we also wanted to bring our European standard and culture to America so that the products reflect that. We are still establishing ourselves here but we are now able to mix being an Italian, family-owned business, whilst having realigned ourselves to the trends we're seeing in America."**

label, as well as a full range of AfH. For retail, there are 54 warehouses located within 500 miles of the site that the company has partnered with, providing one of its main growth areas.

Speaking in excellent English, Giannini proudly says the site is one of two Sofidel sites across the whole of America to have Fabio Perini's Constellation line at present, which he says means it can produce "strong, good-looking, single rolls. As it's so flexible, it gives us better consistency with the product".

Demand for these products is high: "American customers want nice-looking products at a nice price," he says. "We focus on creating an end-product that looks fuller and more premium, which is key for the market here."

It's been a steep learning curve in terms of adapting their European work strategy and culture to fit America's: "We proudly fly our American flag outside our company building, but we also wanted to bring our European standard and culture to America so that the products reflect that. We are still establishing ourselves here but we are now able to mix being an Italian, family-owned business, whilst having realigned ourselves to the trends we're seeing in America. We react quickly and we are very Italian in the sense that our philosophy is our strong work ethic, and we are also fastidious about safety, cleanliness and quality. Our people here want to be proud of what they do."

Law adds that buyers want national, brand equivalent products. "At the moment, they just want brands. No-one will try and push the boundaries. For example, there's not an equivalent here of the British supermarket chain Waitrose that will push the envelope a little in terms of product innovation. Products that are typical in Europe such as 3ply tissue aren't yet accepted. Here it's all TAD and 1ply thousand sheet, as well as packaging and boxes, never poly-wrap. Just two customers here, Aldi and Walmart, want poly. It's because of the strength of manufacturers here such as GP and it means that customers are quite conservative when it comes to innovation and breaking away from the norm. It makes it very hard to get innovations across."

Tissue players in America are also increasingly faced with a consumer and AfH market that's growing at less than 1% per year. Alongside modest GDP growth and a low population growth, Law adds that the company's strategy is two-fold: to continue to invest in the latest energy-efficient technologies and to get new innovations into the market.

The most recent launch was Bio Tech, which uses a solution in the paper that contains spores that activate in contact with organic materials and then dissolve. "As we're so new here, lots of people here don't know Sofidel so products like this show people that we can do innovative stuff that no-one else can," he says. "These are the types of things we're trying to develop in the market. Another key innovation was DissolveTech, which we launched here about two years ago."

The Italian-headquartered Sofidel America is still (as yet) the only European-headquartered tissue mill

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By Tissue World Senior Editor Helen Morris



**Space to expand:** the site supplies private label retail products, converting bathroom, tissue, and roll configurations to service retail customers

to have a manufacturing presence in America. It was founded in 2012 with the acquisition of Cellynne, a manufacturer of consumer and AfH tissue. It now has sites in Florida, where it has two paper machines and converting lines, Wisconsin, Nevada, Oklahoma, Florida and Mississippi which are all converting sites, and a Greenfield investment in Ohio which will house two paper machines and several converting lines.

Law says: "We're covering geographical areas that are key for tissue. Every site we've got we can expand on. And at this Green Bay site we have empty space inside to invest further when we've established ourselves more."

The new Ohio site will house two Valmet-supplied NTT lines, each with a production capacity of 70,000tpy and which are expected to start production in the first and third quarter of 2018.

The move is a crucial step to increase the group's presence across America, as well as position itself in terms of technology: "Our aim is to invest and grow with the most modern and energy-efficient technologies," Law says. "We don't want to use energy intensive technologies, and as we have experience with NTT with our plants in Poland and Spain, we believe that NTT is the way forward in the long run. It's a very sustainable and energy-efficient technology. If we continue to invest in these new technologies, even in a stale market we can position ourselves ahead. If we continue to have overcapacity here as well as see energy price increases, it will be a key move for us."

Giannini says the business will continue to invest in technologies so it can be "competitive in the long run. We're doing new stuff here; no-one has a Constellation line in America, so we're already ahead because we have that."

The key challenges are supplying high-end, TAD-ultra quality products that the customers' desire: "Our goal is to be able to supply all our customers with their private label needs. As for AfH, our strategy is to put innovations in the paper, such as DissolveTech and Bio Tech. There's not much growth in this market, but we have to get people going into more high-end products."

Growth opportunities are mainly in private label, which Law says has a lot of open ground in front of it before it reaches the levels of Europe. "This is being driven by the likes of Aldi, Ahold and new entrant Lidl. Aldi are big here and have been here for a while, while Lidl has maybe 20 sites in southern America, in north and south Carolina. Their stores are very well catered towards the consumers here, big isles and much nicer than in Europe, yet their prices are still low. We do believe that the private label market is very attractive and that there's lots of open ground being driven by discounters such as Aldi. Some 25% of our production here is private label and there are many opportunities."

E-commerce is also rapidly becoming more prevalent. In 2017, Amazon.com

**The move is a crucial step to increase the group's presence across America, as well as position itself in terms of technology: "Our aim is to invest and grow with the most modern and energy-efficient technologies."**

acquired organic food retailer Whole Foods Market for \$13.7 billion, a move that suggests the e-commerce giant believes a physical presence will enable it to distribute products more locally - and more quickly. What will it mean for tissue?

"They bought Whole Foods because they're a high-end retailer, with very, very good supermarkets, so it gets them into the areas they want to be," Law says. "They will use them as distribution hubs which are already starting to sell Amazon products in their stores. E-commerce is a growing sector that we need to be more aware of, it's not going to grow smaller.

"We're doing a little bit now, not for Amazon, but with an independent company. We're taking baby steps into e-commerce. We're also seeing that the Millennials have some unusual buying habits, they're switching away from napkins, using kitchen towels for everything as it's a very diverse product."

**E-commerce is also rapidly becoming more prevalent. In 2017, Amazon.com acquired organic food retailer Whole Foods Market for \$13.7 billion, a move that suggests the e-commerce giant believes a physical presence will enable it to distribute products more locally.**

For the group, Law says there will be lots of changes and developments across the sites. "There is so much competition in America: you've got all of the big manufacturers, a lot of who have exited Europe... Procter & Gamble,

Georgia-Pacific, Kruger, all of which had a presence and exited. We are the first of the European-based companies to come across, but who else will come? We expect other people to follow."



**Scaling new heights:** the company's aim is to invest and grow with the most modern and efficient technologies.

# TISSUE WORLD



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## ***"We've spent a lot of R&D time, energy and money to find a sustainable solution."***

***Morris Housen, chief executive and president of Erving Industries, operates a paper mill in Erving, Massachusetts. Established in 1905, the company employs more than 100 people and has sustainability high on the agenda: it uses nearly 50 million kilowatt hours of electricity and 400,000mcf of natural gas annually. The mill produces napkin, towels and tissue paper. He talks to TWM.***

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Helen Morris  
Senior Editor, Tissue World

### **TWM/1: What is the main opportunity for you over the next five years?**

"We'd like to see a natural gas pipeline built so that we could take advantage of piped, low cost energy."

### **TWM/2: What are the main challenges?**

"China's appetite for wastepaper impacts our wastepaper supply and pricing and wastepaper still has significant flow through Northeastern ports. Obviously, we prefer low and consistent pricing for wastepaper."

"New England electricity is the most expensive in the country. Reducing this cost is critical to long term sustainability."

"This is less of a regional issue, but the growing cost of health care and health care insurance is impacting both our bottom line and our employees pay cheques."

### **TWM/3: Are you looking to grow or acquire?**

"Erving is always interested in incremental growth and we consider both organic and acquisitional avenues. Our focus will remain on jumbo rolls, continuing to provide more, higher and higher quality rolls that meet our customers' needs."

**"China's appetite for wastepaper impacts our wastepaper supply and pricing and wastepaper still has significant flow through Northeastern ports. Obviously, we prefer low and consistent pricing for wastepaper."**



### **TWM/4: How important is product innovation and environmental sustainability?**

"Our mind-set is always on continuous improvement and lately we have had a focus on uniquely innovative products. With regards to environmental sustainability, our Millers River is known to be among the best trout fishing in Massachusetts. We are vigilant about keeping it clean and healthy."

"As a recycling mill, we produce a by-product comprised of significant quantities of precipitated calcium carbonate mixed with small paper fibre. We've spent a lot of R&D time, energy and money to find a sustainable solution for this product."

### **TWM/5: Is there overcapacity in the tissue market there, and how are you dealing with it?**

"We are experiencing overcapacity in the jumbo roll market. Offshore paper and new domestic mills oversupply and soften pricing. Obviously, we would prefer not to have this factoring into our business, but at the end of the day, we believe that competition breeds excellence."

***"A significant number of smaller converters and importers are popping up throughout the industry... it makes for an interesting paradox. While distributors are getting bigger, manufacturers seem to be getting smaller."***

***With distribution consolidating and M&As on the rise, tissue giant Cascades PRO targets opportunities in dispensers, towels and bath tissue. TWM talks to marketing director André Daviault.***

**TWM/1:** What are the main opportunities for you in the north/northeast of America over the next five years?

**André Daviault:** "For our PRO business, we expect that dispensers, towels and bath tissue will be important opportunities for growth in the north/northeast United States. For our retail business, we are a key player in private labels, and growth is accelerating."

**TWM/2:** What are the main challenges in this region?

**Daviault:** "As per any regions, we relentlessly focus on meeting the needs of our customers and those of their customers. Then, we invest to boost the recognition of our branded products amongst customers in the region. Innovation also plays an important role in helping us differentiate from our competitors."

**TWM/3:** Are you looking to grow or acquire further in this region, and if so, how?

**Daviault:** "We are unable to discuss this confidential information."

**TWM/4:** Which tissue sectors are you prioritising in this region, and what growth are they showing and why?

**Daviault:** "The overall tissue market is growing at a 1% to 2% rate and, more specifically, we see increased growth opportunities in hardwound towels and bath tissues. As the market continues to grow, the key to growing alongside it will be innovation."

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

**Daviault:** "Innovation is key to improving market share, brand awareness and sales, and it is one of our priorities. Environmental sustainability is another must in today's business landscape and is something we're proud to say has long been at the core

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Helen Morris

Senior Editor, Tissue World

of what we do. Customers value innovation and sustainability and we make a valiant effort to deliver on both of these fronts."

**TWM/6:** What structural changes are you seeing and how are they changing the tissue market?

**Daviault:** "There is quite a bit of consolidation occurring on the distribution side. Mergers and acquisitions amongst distributors are on the rise within the north/northeast United States, as well as across the country. In addition, there is a significant number of smaller converters and importers popping up throughout the industry, making for an interesting industry paradox. While distributors are getting bigger, manufacturers seem to be getting smaller."

**TWM/7:** Are you seeing a higher presence of private label products here, and why is this? What do you think of the European discount stores Lidl and Aldi coming to America - is it an opportunity?

**Cascades:** "While private labels are certainly prevalent in the United States, they are still underdeveloped when compared to many countries in Europe. We think that European newcomers like Lidl and Aldi, built on private labels, can accelerate the trend on this side of the ocean."

**TWM/8:** Is there overcapacity in the market and how are you dealing with it?

**Daviault:** "There is a lot of new capacity being added into the market from new and existing players. Cascades will continue to prosper by relentlessly focusing on meeting the needs of our customers with quality, innovative and sustainable products backed by reliable and friendly service."

# The Whole World Toilet Paper Museum

*From the Kremlin to the McMurdo Station in The Antarctic and with celebrity signatures including Madonna and Woody Allen, Boston, Massachusetts couple Rich and Flo Newman have amassed a tissue treasure trove.*

**W**e started collecting toilet paper in 1978 as a fun alternative to our other collecting habits. We ended up being completely surprised by the amazing variety of the world's toilet paper at that time.

Differences include colours, textures, imprinting, embossing, weights, manufacturing qualities. Every time one of our friends travelled or went to a special event, we'd ask them to bring back a toilet paper sample – just a few sheets annotated with date, place, event and the collector's name.

Things kept getting more and more interesting as these in-the-field collectors began adding stories, art work, and even celebrity signatures on the toilet paper.

Early on, we discovered that regular ballpoint pens are best for writing on toilet paper (other markers would tear the paper or the ink would run). We started to realise there were different categories for the collection; some of the categories also have sub-categories.

Geographic locations/occupational (i.e. space suit maker; train engineer, etc), historical events/antique pieces/creative artistic (i.e. elaborate drawings on the paper; poetry, etc.), celebrity signed (including musician-signed toilet paper), bookmarks/lengthy pieces that are signed by groups of people; pieces with interesting stories ...

After we had created a website for our band Tagyerit's music in 1995, we



**Early on, we discovered that regular ballpoint pens are best for writing on toilet paper (other markers would tear the paper or the ink would run).**

**We've watched the quality of toilet paper from around the world change over these decades. Now it's becoming more standard soft and white, which is unfortunate for us as we revel in the vast variety of shades of colour and textures that used to be so prevalent.**

decided to have fun with our website and add some of our other interests. We called the toilet paper collection "The Whole World Toilet Paper Museum", though it's a museum in name only, since it's visible on the internet throughout the world.

Then, people we didn't know began contributing pieces and we even received some other people's collections. We were really surprised to find out how many old and antique pieces of toilet paper actually survived in their original condition.

The collection numbers about 1,500 annotated pieces. Here are just a few of the examples:

Gorbachev was under house arrest during an attempted coup d'état.

- McMurdo Station in the Antarctic signed by the entire janitorial staff.

We've watched the quality of toilet paper from around the world change over these decades. Now it's becoming more standard soft and white, which is unfortunate for us as we revel in the vast variety of shades of colour and textures that used to be so prevalent.

At home, the majority of our tissue use is for toilet paper. We do use a small amount of paper towels and paper napkins, but probably a package of each lasts us a year. Our goal in tissue use, as

none. It's reasonably priced, and they market it with a sense of humour too.

While buying environmentally-friendly products should be obvious, it bears repeating and reminding. Current populations as well as future generations should live in a world of plenty and beauty with an earth full of healthy forests.

Ideally, the products we use should be sustainably made with as little energy as possible and with zero pollution. Our grandchildren will thank us for it.

Flo and I both grew up in or around Boston, Massachusetts, in the 1950s. Good strong quality tissue was all around. In diners, the dispensers were filled with paper napkins and only in the fanciest restaurants were cloth napkins provided.

Television commercials were filled with competing claims of which paper towel was strongest or most absorbent. And which toilet paper was softest or even most 'squeezeable'.

We're not big travellers, and that is part of the original impetus for our collection. In 1978, a friend was flying to Europe and asked us what we'd like her to bring us back.

Partly in jest, we asked for toilet paper samples from places she visited. We figured it provided her a free and lightweight option for bringing us souvenirs of her travels. Little did we know it was the start of a small empire.

**At home, the majority of our tissue use is for toilet paper. We do use a small amount of paper towels and paper napkins, but probably a package of each lasts us a year.**

- A clown shoemaker in Massachusetts signed a piece of toilet paper for us. He made half the shoes for the movie *The Grinch Who Stole Christmas*.
- A friend was questioned by police when she left her bags unattended when she ran to get us toilet paper from the ferry station in Ireland. Unfortunately, she missed her boat and had to wait until the next day.
- Madonna signed a piece when she was working on the movie set of *League of Their Own*.
- Woody Allen signed a piece at the Cannes Film Festival and wrote on the toilet paper "Why This?"
- A piece from the Kremlin when

in much of our other purchases, is to be as environmentally-friendly as possible.

For many years, we have bought recycled tissue, but lately have found tree-free options which is actually kind of exciting. A year ago, as a gift, a friend bought us 100% bamboo toilet paper from an online store, Who Gives a Crap ([whogivesacrap.org](http://whogivesacrap.org)).

Not only is it environmentally-friendly, but these people donate 50% of their profits to bring toilets to places that have

**Ideally, the products we use should be sustainably made with as little energy as possible and with zero pollution. Our grandchildren will thank us for it.**

# Extreme automation – energy – process monitoring – premium quality – predictive data – cost optimisation – larger, superior machines – market consolidation – biomass – web formation fibre – Smart Factories

*Top experts at the world's leading tissue machinery suppliers detail their assessments of state-of-the-art systems... and explain how they see advances yet to come. A TWM report.*



## TWM/1: What were your key technical developments during 2017?

**Daniele Checcacci, A.Celli Paper, sales manager, EMEA:** "The revolution is represented by Industry 4.0, the great process change that affects every industrial sector and that A.Celli has interpreted through a precise vision christened «Extreme Automation».

"The A.Celli Group firmly believes in a production process that uses the new technologies dictated by the Industry 4.0 revolution and that can yield a more immediate and concrete optimisation of production in the individual phases of the process. The most interesting and useful aspect is focused on managing the data acquired, on the possibility of filing for future reference, making them the object of an accurate analysis to transmit predictive machine maintenance programs to operators and to act on the system and eliminate defects or non-conformities. And all this in order to maintain the machine park at a superior level of efficiency/productivity, guaranteeing a better quality of the final product.

"A.Celli's intent is actually to create a sort of data connector – an ideal passport – that follows the reel of product from its creation during the rewinding phase, throughout the entire process, up to storage and the converting phases."



**Günter Offenbacher, Andritz, director, sales tissue and drying:** "Lower energy consumption, more product diversification, investment and operational costs – all these are issues that the tissue producer is facing in his daily life.

"Andritz has reacted to this future challenges and built what we believe is the world's most modern innovation centre for tissue, the PrimeLine TIAC – Tissue Innovation and Application Centre, so that customers, suppliers and R&D institutes can test and develop tissue solutions for tomorrow. 2017 was the year for Andritz to install this pilot plant in the headquarter in Graz, Austria, and start with pilot trials for new developments in various areas."

**Francesco De Biasi, GapCon, director:** "GapCon tissue started-up a new, unique and patented concept of stand-alone shoe press application for tissue in Buenos Aires, Argentina, in the second quarter of 2017.

"EconPRESSTM NExT (New Extended nip concept for Tissue) is the new tool for the tissue manufacturing. The main issues that our customer are facing are still energy and resources saving. GapCon has developed the new tissue machine line EconSOFTM

ERS (Energy and Resources Saving), featuring a high consistency headbox, Steel Yankee Dryer with enhanced stiffness and advanced tissue reel. The Papelera Samseng EconSOFTTM ERS machine has already reached the guaranteed production related to 20,5 g/m<sup>2</sup> sheet, with 20% creping factor, reel trim 3,45 m and YD speed of 1.750 m/min.

"The dryness of the sheet entering to the YD features more than 47% at 1,500m/min and almost 46% at 1,750m/min, with operating shoe press linear load set on 200kN/m. The machine is equipped with the YD of dia. 12 foot (3,66m).

"The customer confirmed that he is currently increasing the bulk between 8 – 10% and decreasing the basis weight, with a consequent saving of fibres, getting the same mechanical properties and product quality."

**Shinji Goda, Kawano Zoki, director and general manager of engineering:** "In the paper industry which is also known as the equipment industry, we have achieved several issues in 2017 as in energy saving for the existing equipment, rebuilds to optimise efficiency and the significant reduction in running cost affected by unstable energy price a number of paper makers are facing.

"We are exploring the possibility of further cost reduction in the tissue making process in order to increase competitiveness among tissue makers together with our customers."

**Maja Mejsner, PMP Group, vice president business development & marketing:** "2017 has been very busy for us in tissue, filled with successful start-ups around the globe. We have put five new tissue machines on stream adding in total almost 115,000tpy in Asia and Africa and completed 13 rebuilds in Europe and North America focused on final product quality and/or TM efficiency improvements.

"Compared to our previous experience, we have started up our first turn-key tissue mill for Universal Paper Manufacturers in South Africa (the fifth machine in their fleet that has added 28,000tpy). It was also PMP's first project in Africa and the first state-of-the-art tissue machine installed in South Africa in the last 20 years.

"On 1 October, the machine reached a production level of 10,000t. We have also installed our first integrated tissue mill with medium size, twin tissue machines (Intelli-Tissue® 1200 EcoEc, 3.65m @reel) for Hebei Jinboshi in China. Both projects were based on a philosophy of Optimum Costs Solutions and a blend of deliveries from our facilities in Poland (PMPoland) and China (PMP IB). "In the case of both projects, a driving force was achieving premium tissue quality and an impressive return on investment. We helped our customers to fulfil those goals."



**2017 has been very busy for us in tissue, filled with successful start-ups around the globe. We have put five new tissue machines on stream adding in total almost 115,000tpy in Asia and Africa.**

**Energy consumption continues to be of great importance in most parts of the world. This is especially true in countries where tissue consumption growth is currently highest, such as China.**



**Marco Dalle Piagge, Toscotec, sales director:** "The recurring theme is, of course, to reduce energy consumption in tissue production and to improve paper quality, bulk and softness.

"Listening to our customers' needs, we understand the areas where we have to develop new solutions: we have done it and we are continuing along this track.

"As a result of the ongoing R&D solutions, we now have a new S-Crescent forming area, a dewatering unit on the felt section and a new design on the Pope reel for improved and uniform paper roll winding. Low energy TAD technology is being developed and non-conventional technologies for high bulk paper being tested and ready to run.

"Steel Yankee Dryer is now on third generation phase, and next year will face further improvements, still confidential."

**Ingmar Andersson, Valmet Tissue Mills Business Unit, sales and IPR manager:** "Valmet has continued to refine the equipment and operating parameters for Textured Tissue, the Advantage NTT technology.

"The concept is now implemented at most market areas particularly to offer a clear product differentiator for our customers. In particular, the flexibility to swiftly change from one type of product to a completely different, from plain products to textured, has been appreciated.

"This flexibility makes it possible for tissue makers to introduce new and improved products to the market while still being able to make the standard grades. NTT is thereby a risk mitigation for the future demands."

**Martin Tietz, vice president, global product management tissue, Voith Paper:** "Energy consumption continues to be of great importance in most parts of the world. This is especially true in countries where tissue consumption growth is currently highest, such as China. Voith provides solutions for reduced energy consumption in tissue production lines.

"Specific optimisation programmes make it possible to reduce the energy consumption of existing tissue machines. Voith has developed a solution for customers that have a surplus of hoods heated with steam. Five machines are already running."

**TWM/2:** What changes have you seen in the global tissue market in terms of changes in demand, and what new challenges and opportunities has that presented for paper machine suppliers?

**Checacci:** "Based on our experience and on what we were able to measure directly in the field, the market is shifting in a precise

direction. Our customers are increasingly placing attention on factors that rotate around the concept of sustainability. Energy savings above all, but not only.

"At the root of the demands is a particular research on "process monitoring" that must be increasingly fine-tuned, and on the "quality of the finished product" that must be superior but with a specific attention on the control of the raw materials (equipping the machines with on-line monitoring systems)."

**Offenbacher:** "Andritz is acting worldwide in the tissue business and we are implementing new machine projects in all areas of the world with different targets. For example., a new TAD machine project in the USA for premium paper quality. We are supplying a TAD machine with increased performance.

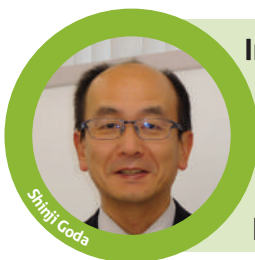
"Increased machine speeds, possible with new patented sheet handling system for TAD paper and secondly with unique tools to reduce machine down-times for fabric changes are some of the new features.

"Furthermore, we are delivering a double-wide tissue machine to South America with an innovative drying concept, single wide machines to Europe and Africa and we are continuing our strong business in China, recently with more new double-wide tissue machines.

"All kinds of machine types and sizes as well as qualities from conventional to premium TAD are requested in the market and Andritz covers the complete range."

**De Biasi:** "In the last year we have seen a relevant increase of entry level tissue machine demand (2.8m paper trim – 50/60tpd average daily production), mainly coming from converters that are planning to produce by themselves their own tissue instead of buying jumbo rolls from the market.

"This resulted in an important market opportunity in terms of potential selling but the business is price driven, so the challenge is to offer the best compromise between machinery price and overall quality."



**In the household tissue market, product differentiation is coming into focus. Products such as facial tissue, toilet and towel are differentiated as superior quality, premium quality and high quality.**

**Goda:** "In the household tissue market, product differentiation is coming into focus. Products such as facial tissue, toilet and towel are differentiated as superior quality, premium quality and high quality. For example, the demand for long toilet rolls (roll length: over 100 metres) has been increasing in Japan.

"Some products have the advantage to be produced with large-size machine and the others with mid-size or small-size machines depending on the demand and user's preferences. As a tissue machine manufacturer, we should put priority on offering the high efficiency machine specification according to the customer's needs."

**Mejsner:** "Consolidations in a tissue business are even stronger than in the past on a global scale. Large tissue corporations take a lead. They've got a number of tissue machines in their fleets and they have a chance to optimise their production and minimise operation costs. In case of new investments, they prefer to add more capacity all at once.

"That is logical, as a process of getting permission to build a single width machine is almost identical with a double width. Taking the last decade into account, the most aggressive players in most cases decided to pick double width machines – especially in mature markets.

Well-esteemed players have been also focused on their assets upgrades to optimise production costs. We have provided several projects of that type in the USA for one of the leading tissue corporation.

"In the case of emerging regions, players are more focused on achieving premium tissue quality at ultra-low media consumption costs. We have noticed a huge interest in our product: PMP Intelli-Tissue®EcoEc line (Crescent Former tissue machines, with a 16 feet or larger Steel Yankee Dryer, a large Suction Press Roll of diameter 1,400mm and a steam heated hood).

"The main interests are an extra bulk and a high dryness up to 46%. We are able to achieve the best figures of steam consumption in the market on those machines lower than 1.78 t/t (note: a steam heated hood incorporated). Also in this case, customers decided to go ahead with bigger machines – a medium size: 3.5-3.6m @ reel – we have sold 10 projects of that type in China recently.

"In addition, those projects are executed based on an Integrated Tissue Mill concept (twin machines, one control room, a simplified building with a smaller footprint – no basement). The point is again – a cost optimisation.

"I believe we should expect more new larger, lower-cost and more efficient machines. More expansion projects will be observed within existing mills with their own, existing infrastructure – that will help to optimize investment costs.

"Existing producers with older assets will have to think about rebuilds to stay competitive. Smaller ones (with outdated lines) won't be able to compete any longer and they will be closed."

**Dalle Piagge:** "Tissue producers nowadays focus on higher quality tissue and the creation of new products. They are looking at these two main areas to expand their business. We are also witnessing market consolidation in some regions. In such an increasingly tough environment, producers look for the competitive advantage that their core equipment can offer. This is our domain. As tissue machine supplier, we must rise to the challenge by understanding the specific characteristics of a given market and provide the most effective technical solution.

"We are involved in projects from North America to China, Europe, Africa and Latin America: each of them has a specific issue related to energy source, gas availability, energy prices etc. The key of our success is to design the tissue machine according to the market/customer's need: in a simple word, "customisation" is the solution!"



**The level of the final product quality is increasing on virtually every market. Also, the "commodity-like" products are seeing a demand for improved level.**

**Andersson:** "The level of the final product quality is increasing on virtually every market. World class technology is requested in every market. Also, the "commodity-like" products are seeing a demand for improved level.

"Valmet is now delivering our Advantage DCT concept to all markets following the same high level of standards. Some machines are smaller because of less demand but the tissue products produced are all intended to be the same."

**Tietz:** "Standard dry-crepe tissue machines are still of great importance in most regions. Here, energy consumption and overall efficiency are important for reducing production costs.

Different machine concepts for higher tissue qualities are requested only in selected regions and to a limited extent. They have to cover a wide variety of products and qualities."

### **TWM/3: What new challenges do you face in terms of providing energy efficient machines for your customers? How are you dealing with this?**

**Checacci:** "As partially anticipated, A.Celli intends on tackling the research on the theme of sustainability by entrusting its production processes to technologically evolved, latest-generation systems for energy recovery in the process phases (steam – water)."

**Offenbacher:** "Given by the global requirement to reduce energy consumption and by the pressure to minimise production cost, energy consumption is and will stay a key factor in this business. For the project in South America, we are implementing an innovative drying system, using 100% renewable energy, which is biomass energy.

"The drying section comprises a giant steel Yankee with 22ft and a steam hood, optimised for maximum drying performance and minimised maintenance.

"We have delivered the new PrimePressXT shoe press to the market with advantages of dryness increase, energy reduction and runability improvement. Conventional dry crepe tissue machines are limited with a certain post press dryness (either with single, double or shoe press) by its concept.

Andritz has introduced a new machine concept to overcome the limitations of a conventional Crescent Former. This concept will allow for further increase of machine performance and reduction of energy consumption."

**De Biasi:** "We are dealing with the supply of energy efficient machinery and also with the need to save fibre and fresh water as much as possible. Our answer to this is our EconSOFTTM ERS

tissue line featuring several tools for energy and resources saving. However, machinery is not the exclusive answer: a lean and smart process concept (stock preparation, approach flow, broke management and process water circuit) always results in money saving on operational costs. As a global tissue line supplier, we design the right process according to real customer requirements.

Finally, there're some third part technologies (i.e. vacuum blowers instead of liquid ring pumps) that contribute as well to energy and water consumption decrease in the tissue industry."

**A smart process concept always results in saving on operational costs. As a global supplier, we design the process according to customer requirements.**



**Goda:** "In tissue machines, we focus on the press part and the dry part. We foresee the further development of Wide Nip Press and Steel Yankee Dryer technologies in the near future.

"Also, energy recovery is the area that remains to be a challenge and always has space to improve. We are going to offer the equipment adjusted to each part and we believe it can benefit the customers in a great energy recovery."

**Mejsner:** "We are observing two trends: energy cost reduction through lowering energy consumption and looking for alternative energy sources. Our efforts are focused on applying robust solutions like large diameters Steel Yankee Dryers (we consequently extend our portfolio in this field following market trends), large diameter suction press rolls and highly efficient hoods.

"In addition, our PMPower division provides smart ideas for existing mills like a new recovery steam generator system from the hood exhaust fumes.

"For instance, at Wepa Lille in France, a recovery energy system allows to save more than 25 % of a steam flow by main generator to the machine and consequently fuel consumption is reduced as well.

**Dalle Piagge:** "This is a central theme in Toscotec's approach to new projects. Due to environmental concerns, governments are introducing stricter policies, which have a direct impact on industries in different sectors. The paper industry is no exception.

"At the same time, the cost of energy is rising everywhere in the world. As a result, the first demands of our customers

**For many years now, we have been the pioneer of new solutions that aim at reducing energy consumption and rely on the most cost-effective energy sources.**





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are energy efficiency and energy recovery. For many years now, we have been the pioneer of new solutions that aim at reducing energy consumption and rely on the most cost-effective energy sources. For example:

- Toscotec invented and promoted the Steel Yankee Dryer while all our competitors were against it (with no exception!) I clearly remember many speeches and conferences worldwide with our competitors denying the positive results and emphasising the doubts.

This is history and today everyone agrees that our invention has become a true innovation. The TT SYD is the reference on the market, the one and only.

- Modern high-speed TM with steam heated hood only. We started in 2010 and our projects have inspired our competitors: some of them now have this solutions in their portfolio.

An example of our design in this respect is "Prodergy" (Production meets Energy): big TT SYD diameter 22' (the biggest Steel Yankee Dryer manufactured so far), with steam heated hood and a record speed of 2,000mpm.

- Regarding top paper quality (structured tissue), TAD is in our range. We also have a project of a TAD machine with steam only, obtaining a significant production cost reduction."

**Andersson:** "Energy efficient solutions nowadays are always discussed in conjunction with any request for new capacity from all markets globally.

"Valmet have developed a series of new solutions offered to the market such as ViscoNip Press, ReDry Steam generation, NTT concept, ReTurne energy recovery system, OptiFlo Tis Headbox, ReGen Co-generation of electricity, hot air and steam, Yankee Dryer designs, heat recovery in Yankee hood systems etc.

"If all such inventions would be implemented in the complete line we could offer a line which in practice would operate at about 50% of the standard tissue machine 20 years ago, now about 1,600kWh/tonne total energy for the line.

"However, in practice due to other limitations new investment projects do not allow to implement all technology available but as we find ways to standardise and reduce the cost all these improvements will make its way into our delivery projects."

**Tietz:** "Energy efficiency has been important for decades. This has meanwhile spread to most parts of the world. Voith continues to equip machines with low total energy consumption. The entire process is optimised

in order to reduce energy demand. In addition, add-on modules are available that further reduce the energy demand as needed."

## TWM/4: What geographical areas do you forecast to have the most tissue growth in 2018 and beyond and why are these areas seeing this?

**Checacci:** "We expect a continuing large demand coming from the areas that in recent years have given us great satisfaction: China and the Middle East in particular, but also from Eastern Europe.

"The population density and lower per-capita consumption compared to the standards may be an initial reason, but the truth is that the world's economic centre of gravity is evolving faster and faster. And we must not forget that A.Celli aims for a worldwide presence. In addition to its Italian facilities, the A.Celli Group is present in Istanbul, Turkey (A.Celli Turchia), in Asia, with a division in Shanghai (A.Celli Shanghai Machinery Co.) and in the Americas, in Concord, NC (A.Celli International)."

**Offenbacher:** "The highest dynamic growth is still expected to take place in China in 2018.

"Certainly the project activity is reduced compared to the years before due to some overcapacity, but the consumption will continue to grow, mainly based on following the economic growth, and the fact that the average tissue consumption is still at a level with much room to the level we see today in North America or Europe.

"With our strong presence in Foshan, Guangdong province, Andritz is well prepared to fulfil the future market demands in China and Asia. We provide manufacturing capabilities – meanwhile we have manufactured the biggest Steel Yankees ever made in China, two 20ft steel Yankees for double-wide machines.

"Beside machine delivery, Andritz China does also provide extensive Yankee service to all customers out of our Steel Yankee manufacturing centre in Foshan."

**De Biasi:** "The US market is currently one of the more interesting in terms of business opportunities. The market has still some margin of growth in terms of production but the average age of existing machines is quite elevated.

"We see a big potential in rebuilds, looking at headbox replacement (high consistency headbox), forming section rebuild (crescent former instead of fourdrinier), press section retrofit (i.e. EconPRESSTM NExT shoe press installation), drying section efficiency improvement (enhanced heat recovery system in the hood air system, Cast Iron Yankee replacement with steel made cylinders), reel section performance increasing (full width automatic turn-up)."

**Goda:** "We would say it is Middle East and South East Asia where the growth rate marks high. Tissue demand will increase in these areas with remarkable development due to the awareness of hygiene control.



**We expect a continuing large demand coming from the areas that in recent years have given us great satisfaction: China and the Middle East in particular.**

"Also, even though it is short-term trend, the tissue demand in Tokyo where the Olympics 2020 will take place tends to grow."

**Mejsner:** "The tissue sector is healthy and grows at a global scale by almost 4% per year. It is a pretty dynamic market: today China is a leading producer of tissue followed by North America and Western Europe."

"Recently we observe local overcapacity (for example Turkey) caused by active investments."

"On the one hand, the tissue sector attracts investors as hygiene was, is and will be a pillar of an economy and a society needs tissue products so a good ROI is a temptation."

"On the other hand, as overcapacity and a stronger competition decrease margins, costs' consciousness is crucial."

"Nevertheless, we believe tissue production will grow steadily. According to industry experts, we should expect plus one million tonnes of tissue every year worldwide."

"New trends like closures of unproductive, outdated lines (for instance in China) and potentially conversion projects of newsprint machines (in North America) will become more visible."

"Latin America is in need to grow, however political instability may cool down that process. I strongly believe that emerging economies like Eastern European countries (Russia especially), China and Latin America will show their strength and will shift their tissue production to a higher level soon."

"More mature economies like Western Europe and USA will have to focus more consciously on production costs (through tissue machine upgrades) to stay in a game."

"More and more modern tissue lines have been put on stream bringing high quality products at lower production costs. There is also a huge pressure of private labels against branded products."

"The point is to act smarter rather than harder and find a way to stay competitive."

**Dalle Piagge:** "Based on today's average pro-capita consumption and economy growth, we are still convinced that Asia will have a significant part of the new tissue projects. Consolidation and company acquisitions will help to enhance the performances of the strongest ones and push them to further expand with new projects."

"We also believe that new opportunities will come in mature markets due to product diversification with new non-conventional TMs."

"Besides, Europe, Japan and North America have a large number of old machines, which are in need of optimisation and upgrading."

**Andersson:** "The biggest areas of growth will be China. This is because it is the home base of some of the most ambitious investors in this industry and they are fighting for the market position."

"The urbanisation and increase of consumption will cover for some of this expansion but we also think the export will grow and affect also other markets."

"However, the investment pace in China might be slowed down in practice as it seems stricter environmental regulations are being implemented and it takes more time to receive all necessary permits."

"Other markets are more predictable and will grow in accordance with established general growth trends."

**Tietz:** "Tissue consumption growth in China will remain high due to the economic development. Wealth will allow more households to use tissue products. The installation of new tissue production lines might decline temporarily due to the large recent capacity increase. But overall growth will remain strong."

## TWM/5: How are new paper machine technologies in the market changing your R&D strategies? What key technical areas will you be looking into in 2018?

**Checcacci:** "A.Celli is poised to provide a dedicated answer based on the different and motley demands of the specific market area."

**Offenbacher:** "One tissue machine eight configurations – Andritz TIAC pilot tissue machine offers utmost flexibility."

"We are looking into all areas of future tissue production. Starting from conventional dry crepe machines we will intensify our R&D work into new machine concepts."

"Textured tissue will be one area, bringing together energy efficiency and higher sheet quality. Premium structured tissue (TAD), where wet moulding creates a 3D arrangement of the fibres, preserved by means of air-drying without additional pressing will be another strong focus."

However, such premium-structured tissue shall be produced with lower energy input in the future, as it is with TAD nowadays."

"Our R&D strategy does not only focus on new machine concepts, but as well on optimising of consumables, auxiliaries, furnish and additives, hand-in-hand with the respective machine concept."

"In these fields, we are working together with innovative product leaders in the tissue industry, who have also contributed to the realisation of the Tissue Innovation and Application Centre."

**Our R&D strategy does not only focus on new machine concepts, but as well on optimising of consumables, auxiliaries, furnish and additives.**



**De Biasi:** "We are working to be an active player in the technological evolution of tissue making. The technical area we'll look in 2018 is the web formation fibre saving along with process water use reduction, as well as tissue sheet final product quality improvement."

"The focus will be still on energy and resources saving. We have more development ideas in pipeline."

**Goda:** "We intend to develop our Former technology further. Former technological innovation contributes to increase the capacity with just small changes in machine designs."

"This can be applied not only to new machines but also to the rebuilds of existing machines and we believe that this technology is accepted by our customers as it can maximise the capacity with low investment."

**Mejsner:** "First of all, we need to adjust our offer to customers depends where they need to act. The most important is to listen carefully."

"A Crescent Former technology (especially our EcoEc line) will still play an important role in the tissue world as this technology is proven and operator-friendly."

"With all extras like multilayer hydraulic headboxes, large Steel Yankee Dryers, a large SPRs (or alternatively a shoe press) it is an optimum concept for emerging economies."

"More mature markets like Western European countries and USA will have to pay more attention to costs. Sounds like structure tissue ideas and utilising a shoe press technology might be an answer."

"We should also remember about upgrades potential. Sometimes changing a headbox only might bring a significant improvement. We are also watching conversion projects (PMP Phoenix Concept® rebuilds)."

"We have collected lots of experience within paper side however there are more and more examples of following that trend also in tissue (a profile change from newsprint into tissue) and as PMP we are ready to support our customers."

"I believe that energy will play even more important role in a next couple of months. That is why we are planning to intensify our development works of Intelli-Nip® shoe press that is going to be a part of a new line Intelli-Tissue® Ultra to bring even higher dryness and offer more production flexibility in all width TM ratio single, medium and double width machines."

**Dalle Piagge:** "Our present and future investments in R&D remain oriented to the reduction of overall energy consumption, with the new challenging target of quality for premium paper grades."

"Recent developments in paper machine technologies are also driving a raised interest of the market in structured paper grades, or at least in sensibly different quality grades in terms of bulk, softness, and other key parameters."

"ToscoTec is proposing solutions that make a step ahead in this direction, and in 2018 we will introduce new technological solutions to cover improved conventional

machines or structured paper oriented, low energy consuming, TAD machines."

"Industry 4.0 is also the area of our strong interest, being a full control of the process a key factor for process optimization, control, and troubleshooting, making the overall efficiency increase."

"Current and future projects are foreseeing the capability to implement this feature on a partial or full range on the process."

"The latest innovations on Steel Yankee Dryer TT SYD will also be available with important technical achievements that will again be a breakthrough in the market and the benchmark for the next few years."

**Andersson:** "We continue to support the development of new improved tissue product quality supporting our customers more competitive on the market."

"In addition, saving fibre material, water and energy is always guiding our R&D as well as the overall stability and reliability of the total process."

"Industrial internet and utilisation of digital solutions is another important part of our future. Valmet is in the forefront of this development and we intend to move forward in this way."

**Tietz:** "Voith will continue to develop tissue production technologies for all segments. The R&D strategy has a long-term orientation and is not subject to annual changes. New, customized solutions with high efficiency and a low energy demand will remain important. Digitization will be an important tool in achieving this."

## TWM/6: What overall trends in tissue machine manufacture will have the greatest impact on the production process in five years time?

**Checacci:** "Producers' demands are in a continuous quest to rely on stable, repeatable and efficient processes. These factors are at the base of the system defined as the SMART FACTORY and that entails the evolution of the company that has moved on to automated and intelligent systems, operating autonomously and in contact with the surrounding environment."

"A.Celli aims for global integration of the machines, extending its supply to the automatic warehouse of the semi-finished product."

"The different areas of the plant are connected by automatic vehicles for reel transport (AGVs) and every single area is equipped with high-quality performance technologies."

"The technological focuses of our system are RFID technology as reel passport and data management on a Cloud platform to share with customers."

"This is why today we no longer consider ourselves mere machine manufacturers, but a centre of excellence and of knowledge, aimed at guaranteeing our customers the best

results in terms of performance, innovation, quality and optimisation of investments.”

**Offenbacher:** “Enhanced machine intelligence of electrification, instrumentation, and automation – we name it PrimeControl E.

“Some examples: Operation will change more and more from the centralised control room to autonomous operation, using mobile devices and augmented reality, where all process and production information is visualised exactly where it is needed.

“Embedded systems, such as drives, QCS, monitoring systems, make sure that all information is made available in one device.

“OPP – Optimisation of Process Performance – is based on smart sensors, big data analysis and augmented reality. KPIs, which are being identified out of process correlations, lead to improvements in productivity and quality, reduction of energy consumption and sustainability of production.”

**De Biasi:** “Everybody knows that raw fibres and energy accounts for 70% – 75% of the cost of 1 ton of tissue paper. The trend of the next five years will be to produce premium tissue quality with reduced amount of fibre while increasing the overall energy efficiency of the whole tissue plant.

“In addition to that, the trend is to introduce new products and grades in the market (i.e. structured tissue).

“The GapCon latest tissue machine EconSOFTTM ERS design, featuring shoe press EconPRESSTM NExT, opens new relevant scenarios for the production of premium quality tissue paper.”

**Goda:** “We foresee the machine manufactures that cover total engineering will be most appreciated by the customers. The equipment technology complying with customers’ needs and the training of maintenance technology would be essential. In addition, it is our responsibility to provide working environment to conducive to operators.”

**Mejsner:** “There are three main drivers that fuel a technological growth in tissue machinery: an energy saving need, a tissue quality improvement and an increase of safety. In addition, there is a need of higher system automation according to a philosophy of Industry 4.0.

“Energy saving solutions are directly connected with an activity especially in the area of a drying section: huge Steel Yankee dryers (up to 20-22 feet), large diameter suction press rolls or shoe presses, highly efficient auxiliary systems (steam and condensate systems, vacuum systems, high-efficient hoods) should be mentioned first.

“The game is to keep the balance between as low as possible media consumption rate (as highest dryness level as possible) and a softness of a product.

“Tissue quality should surprise consumers in a positive way and it varies depends on the region. Mature economies will look for premium softness, whereas emerging markets will compare achieved quality to previous technologies.

“Technologies that guarantee a success are multilayer headboxes (double, triple or even 4 layer type) – Intelli – Jet V®, large diameter suction press rolls or shoe press technology Intelli-Nip®, a vast range of machine clothing and alternative roll covers.

“Finally, safety is of highest importance. A level of staff competences is decreasing so solutions provided within a tissue line should somehow prevent hazardous situations, be user-resistant. The philosophy of Industry 4.0 should help to create a smart factory where data can be easily stored and analysed and processes can be optimized.

“Then best is a chance to practice on virtual model before a user starts to perform in a real situation. We also should not neglect understanding of local market requirements, taking care of good communication with future users (name tags in a local language, periodical safety trainings) and observing daily operations to implement additional protection.”

**Dalle Piagge:** “Any new technical achievement in the next years will have to be about the increased market demand of premium quality grades, with progressively lower energy need.

“On this path, increased tissue machines efficiency will be key target in a good process design, but also high-quality manufacturing standards and material quality control are requirements not to be missed nowadays for stable operation and reduced downtime needs.

“Process controls, reliable and operator oriented management systems will be essential vehicles to a real efficient operation. With our R&D department, we will be therefore focused not only on equipment, but also on process and controls.

“We have developed proprietary software MCS and DCS for tissue machine and plant process control, and continue on this path to propose newer systems more and more open to Industry 4.0 ongoing achievements.”

**Andersson:** “Flexibility to meet different market demands in the production process will become more important with the ability to swiftly adjust to market needs in many cases supported by machine intelligence and remote services. Also, the flexibility to respond to different energy sources is becoming increasingly important.

“Different sales and distribution needs will request quick response in the manufacturing and supply chain. Internet of Things will spur this development.”

**Tietz:** “Digitisation will provide new possibilities for the production process, operating efficiency, machine maintenance, operator training, and much more. Papermaking 4.0 will bring today’s tissue making to a new level.”

# Project Survey

**2017** has seen an increase in tissue projects compared to the same time a year earlier. TWM's annual survey charts all

new capacity being added, ordered or in final planning stages during 2017-2018. The survey is interested in projects that will increase tissue capacity – the numerous smaller rebuilds around the

world that won't impact capacity have been excluded.

All the figures in the survey are based on the best information provided and

COUNTRY	COMPANY MILL	INVESTMENT	PM NO	NEW / REBUILD	START-UP DATE	CAPACITY CHANGE (tonnes/yr)	PM TRIM (m)
Abu Dhabi	Crown Paper Mill	Abu Dhabi	NA	New	2019	60,000	5.6
Abu Dhabi	Fine Hygenic Holding	Al Nakheel	NA	New	2017	60,000	5.6
Algeria	Paper Mill Investment (PMI)	NA	1	New	2018	NA	2.8
Americas	Irving Consumer Products	NA	NA	New	2018	NA	5.6
Argentina	Celulosa Campana	NA	3	New	2018	100tpd	2.7
Argentina	Celupaper	Papelera Nicaragua	4	New	2017	22,750	2.7
Argentina	Celupaper	Papelera Nicaragua	5	New	2018	22,000	2.7
Argentina	Papelera Samseng	Buenos Aires	1	New	2017	48,000	3.4
Africa	Confidential	Confidential	2		2019	115tpd	2.7
Asia	APP	Confidential	1	New	2017	60,000	5.6
Asia	APP	Confidential	1	New	2018	60,000	5.6
Asia	APP	Confidential	1	New	2018	60,000	5.6
Asia	APP	Confidential	2	New	2018	60,000	5.6
Asia	APP	Confidential	3	New	2018	60,000	5.6
Asia	APP	Confidential	4	New	2018	60,000	5.6
Asia	APP	Confidential	5	New	2018	60,000	5.6
Asia	APP	Confidential	6	New	2019	60,000	5.6
Bangladesh	Bashundhara Paper Mills	NA	4	New	2018	NA	2.8
Bangladesh	Meghna Group of Industries	NA	1	New	2017	50tpd	2.8
Bangladesh	Partex-Star Group	NA	NA	New	2017	NA	2.8
Bolivia	Papelera Vinto	NA	3	New	2017	25,600	2.8
Bolivia	Confidential	NA	4	New	2018	32,000	2.8
Bolivia	Copelme	Santa Cruz de la Sierra	4	New	2018	26,000	2.7
Brazil	Cia Canoinhas	NA	4	New	2017	28,800	2.8
Brazil	Carta Fabril	Anápolis	6	New	Confidential	NA	5.5
Brazil	Estrela	NA	3	Rebuild	2017	24,120	2.8
Brazil	Fex Papeis	NA	1	Rebuild	2017	14,400	2.8
Brazil	Manikraft	NA	3	Rebuild	2017	18,000	2.3
Brazil	Mili	NA	8	New	2018	38,300	2.8
Brazil	Santher	NA	4	New	2017	25,600	2.8
Brazil	Suzano Papel e Celulose	NA	NA	New	2017	70,000	5.6
Brazil	Suzano Papel e Celulose	NA	NA	New	2017	70,000	5.6
Confidential	Confidential	NA	1	Nw	2017	110tpd	2.8
Confidential	Confidential	NA	NA	New	2019	60,000	5.6
Confidential	Confidential	NA	NA	New	2018	60,000	5.6
Confidential	Confidential	NA	NA	New	2019	60,000	5.2.
Confidential	Confidential	NA	NA	New	2018	35,000	3.5
Confidential	Confidential	NA	NA	New	2019	28,000	2.7
Confidential	Confidential	NA	NA	New	2018	60,000	5.6
China	Baodingshi Gangxing Paper	NA	7	New	2017	17,000	2.8
China	Confidential	NA	NA	New	2017	35,000	3.5

# 2017/18

## P Project Survey

By Tissue World Senior Editor **Helen Morris**

this has included TWM's own extensive research as well as relying on reliable responses from companies asked to detail their present and future developments.

It also includes first-hand knowledge gained from the many visits to tissue mills around the world for TWM's bi-monthly Country Reports analysis, which during 2017 included visits to

**TWM's annual survey charts all new capacity being added, ordered or in final planning stages during 2017-2018. The survey is interested in projects that will increase tissue capacity – the numerous smaller rebuilds around the world that won't impact capacity have been excluded.**

your peers and competitors in Italy, Brazil, Scandinavia, Canada and Japan.

We aim to meet tissue mills that have news and experience that relates to you – a new tissue machine start-up, a new products launch, new export target markets. The visits give TWM a unique in-sight into why that region and its tissue players are investing or not.

Tissue mill projects were up this year, with many economies settling and exports growing.

However, for this year, as with last, many of the projects are subject to revision as, in many cases, information was not provided because it was deemed commercially sensitive or subject to financial uncertainty.

It's also the case that a distinctive feature of this time in the cyclical development of tissue production is marked by the timely closure of old facilities to make way for the new.

In some cases, delayed start-ups have meant projects have been repeated from last year's survey; some of the 'new' capacity announced this year in fact includes some of last year's estimate.

Many projects have also been purposefully delayed, largely to deal with overcapacity or economic

	PM SPEED (m/min)	SUPPLIER	COMMENTS
	2200	Valmet	Advantage DCT 200 with ViscoNip press
	2200	Valmet	Advantage DCT 200TS with ViscoNip press
	2200	Andritz	PrimeLineCOMPACT VI (ShoePress)
	NA	Valmet	Advantage ThruAir
	1700	Recard	Crescent Former
	1300	Toscotec	MODULO-PLUS
	1300	Toscotec	MODULO-PLUS
	1800	GapCon Tissue	EconSOFT ERS with shoe press EconPress NExT
	1800	Recard	Crescent Former
	2000	Toscotec	AHEAD-2.0L PRODERGY
	2000	Toscotec	AHEAD-2.0L PRODERGY
	2000	Toscotec	AHEAD-2.0L PRODERGY
	2000	Toscotec	AHEAD-2.0L PRODERGY
	2000	Toscotec	AHEAD-2.0L PRODERGY
	2000	Toscotec	AHEAD-2.0L PRODERGY
	2000	Toscotec	AHEAD-2.0L PRODERGY
	2000	Andritz	PrimeLineCOMPACT VI (Steel Yankee)
	1050	Recard	Easy Crescent former
	1800	A.Celli	Complete turn-key tissue plant
	1600	Hergen	Ribbed Steel Yankee Dryer
	1600	Hergen	Crescent Former and felt section EVO 16
	1500	GapCon Tissue	EconSOFT - turnkey project
	2000	Hergen	Crescent Former machine
	2100	Andritz	PrimeLineST W22 with Steel Yankee (22 ft.)
	1600	Hergen	Ribbed Steel Yankee Dryer
	1100	Hergen	Compete former section
	1100	Hergen	Crescent Former and felt section EVO 12 + New Gas Hood
	2200	Hergen	Complete Paper Machine Avantis 18
	1600	Hergen	Ribbed Steel Yankee Dryer
	2000	Voith	VTM 4 with NipcoFlex T shoe press, Steel Yankee
	2000	Voith	VTM 4 with NipcoFlex T shoe press, Steel Yankee
	1800	A.Celli	Turn key plant
	2200	Valmet	Advantage DCT 200 with ViscoNip press
	2200	Valmet	Advantage DCT 200 with ViscoNip press
	2000/1800	Valmet	Advantage NTT 200
	2000	Valmet	Advantage DCT 135 with ViscoNip press
	1300	Toscotec	TAD
	2200	Valmet	Advantage DCT 200 with ViscoNip press
	1000	Kawano Zoki	BF-1000S
	1600	PMP	Intelli-Tissue® 1600 EcoEc Premium

# Project Survey

conditions. Additionally, a number of companies also issued projections for impressive tonnes per day figures, which will add, in the terms of the survey, unknown capacity.

With that in mind, in the past 12 months the global tissue industry has seen another substantial amount of new capacity announced or coming on stream, with 121 projects. This is compared to

2016's 111 projects, 2015's 126 projects, and the 146 in 2014.

Most of this year's projects are once again set in China, which claims 37

COUNTRY	COMPANY MILL	INVESTMENT	PM NO	NEW / REBUILD	START-UP DATE	CAPACITY CHANGE (tonnes/yr)	PM TRIM (m)
China	Confidential	NA	NA	New	2018	35,000	3.5
China	Confidential	NA	NA	New	2018	35,000	3.5
China	Confidential	NA	NA	New	2018	35,000	3.5
China	Confidential	NA	NA	New	2018	35,000	3.5
China	Confidential	NA	NA	New	2018	35,000	3.5
China	Confidential	NA	NA	New	2018	35,000	3.5
China	Confidential	NA	1	New	2017	27,000	3.5
China	Confidential	NA	2	New	2017	27,000	3.5
China	Guizhou Chitianhua	Chishui	5	New	2017	50,000	5.6
China	Guizhou Chitianhua	Chishui	6	New	2017	50,000	5.6
China	Hebei Jinboshi Group	Baoding City, Hebei Province	1	New	2017	17,300	3.6
China	Hebei Jinboshi Group	Baoding City, Hebei Province	2	New	2017	17,300	2.3
China	Hebei Yihoucheng	Baoding	2	New	2017	25,000	2.8
China	Hengan Chongqing	Chongqing	23	New	2017	60,000	5.6
China	Hengan Chongqing	Chongqing	24	New	2017	60,000	5.6
China	Lee & Man Paper Manufacturing	Chongqing	13	New	2019	60,000	5.6
China	Lee & Man Paper Manufacturing	Chongqing	15	New	2019	60,000	5.6
China	Lee & Man Paper Manufacturing	Chongqing	16	New	2019	60,000	5.6
China	Lee & Man Paper Manufacturing	Chongqing	17	New	2019	60,000	5.6
China	Lee & Man Paper Manufacturing	NA	9	New	2017	70,000	5.6
China	Lee & Man Paper Manufacturing	NA	10	New	2017	70,000	5.6
China	Lee & Man Paper Manufacturing	NA	11	New	2017	60,000	5.6
China	Lee & Man Paper Manufacturing	NA	12	New	2017	60,000	5.6
China	Shaoxing Welfare Paper	NA	6	New	2018	17,000	2.8
China	Vinda Paper (Zhejiang) Co	Zhejiang	3	New	2017	28,800	3.4
China	Vinda Paper (Zhejiang) Co	Zhejiang	4	New	2017	28,000	3.4
China	Vinda Paper	Yangjiang	1	New	2018	32,000	3.4
China	Vinda Paper	Yangjiang	2	New	2018	32,000	3.4
China	Vinda Paper	Confidential	5	New	2018	32,000	3.4
China	Vinda Paper	Confidential	6	New	2018	32,000	3.4
China	Vinda Paper	Confidential	7	New	2018	28,000	3.4
China	Vinda Paper	Confidential	8	New	2018	35,000	3.4
China	Xinjiang Hengan Paper Co.	Changji	25	New	2017	25,000	2.8
China	Xinjiang Hengan Paper Co.	Changji	26	New	2017	25,000	2.8
China	Yubin Paper	NA	5	New	2017		2.8
Egypt	Alex Converta	NA	1	New	2018	78tpd	2.8
Ecuador	Papelera Vinto	NA	1	New	2018	18.250	2.7
Guatemala	Papelera Internacional (Kruger Group)	NA	6		2018	120	2.7

# 2017/18

## P Project Survey

By Tissue World Senior Editor **Helen Morris**

projects compared to last year's 35. Outside of China, the other global player America, which claims seven, down from nine projects in 2016.

Growth is also still focused on or from countries such as Brazil which claims nine projects, a decrease (likely because of economic reasons) from last year's 12 projects.

**Most of this year's projects are once again set in China, which claims 37 projects compared to last year's 35. Outside of China, the other global player America, which claims seven, down from nine projects in 2016.**

Japan also has an impressive nine projects in the pipeline.

Overcapacity in many markets has evidently resulted in a slowdown of new project announcements.

As with last year, the scale of these machines is also significant – a large proportion of these new start-up machines have widths of 5.6m.

In 2018, TWM endeavours to bring you more in-depth analysis on tissue mills and their projects across the world with our Country Reports focused on regions as far ranging as USA, Mexico, China, Turkey, UAE and Thailand.

### CAUTION:

All aggregates taken from the survey should be treated with some caution. While all care has been taken to publish comprehensive data, it is inevitable that projects will be missing or details incomplete. Many projects have also been delayed so start-up data used in the 2016 Project Survey has had to be repeated. We welcome your help to ensure as comprehensive a survey as possible at the end of 2018.

	PM SPEED (m/min)	SUPPLIER	COMMENTS
	1600	PMP	Intelli-Tissue® 1600 EcoEc Premium
	1600	PMP	Intelli-Tissue® 1600 EcoEc Premium
	1600	PMP	Intelli-Tissue® 1600 EcoEc Premium
	1600	PMP	Intelli-Tissue® 1600 EcoEc Premium
	1600	PMP	Intelli-Tissue® 1600 EcoEc Premium
	1600	PMP	Intelli-Tissue® 1600 EcoEc Premium
	1300	Kawanoe Zoki	BF1500S
	1300	Kawanoe Zoki	BF1500S
	1800	Andritz	PrimeLineST W20 (Steel Yankee)
	1800	Andritz	PrimeLineST W20 (Steel Yankee)
	1200	PMP	Intelli-Tissue® 1200 EcoEc
	1200	PMP	Intelli-Tissue® 1200 EcoEc
	1600	Andritz	PrimeLineCOMPACT CII (Steel Yankee)
	2000	Andritz	PrimeLineTM W8 (Steel Yankee)
	2000	Andritz	PrimeLineTM W8 (Steel Yankee)
	2200	Valmet	Advantage DCT 200 with ViscoNip press
	2200	Valmet	Advantage DCT 200 with ViscoNip press
	2200	Valmet	Advantage DCT 200 with ViscoNip press
	2200	Valmet	Advantage DCT 200 with ViscoNip press
	2000	Voith	VTM4 with NipcoFlex T shoe press, Steel Yankee & Steam Hood
	2000	Voith	VTM4 with NipcoFlex T shoe press, Steel Yankee & Steam Hood
	2000	Voith	VTM 4 with NipcoFlex T shoe press, Steel Yankee & Steam Hood
	2000	Voith	VTM 4 with NipcoFlex T shoe press, Steel Yankee & Steam Hood
	1000	Kawanoe Zoki	BF-W10S
	1500	Toscotec	AHEAD-1.5M
	1500	Toscotec	AHEAD-1.5M
	1600	Toscotec	AHEAD-2.0M
	1600	Toscotec	AHEAD-2.0M
	1600	Toscotec	AHEAD-2.0M with shoe press
	1600	Toscotec	AHEAD-2.0M with shoe press
	1600	Toscotec	AHEAD-2.0M with shoe press
	1600	Toscotec	AHEAD-2.0M with shoe press
	1600	Toscotec	MODULO-PLUS
	1600	Toscotec	MODULO-PLUS
	1600	A.Celli	Tissue machine with approach flow
	1500	Recard	Crescent Former
	1100	Hergen	Crescent Former machine Smart Fit
	2000	Recard	Crescent former

# Project Survey

COUNTRY	COMPANY MILL	INVESTMENT	PM NO	NEW / REBUILD	START-UP DATE	CAPACITY CHANGE (tonnes/yr)	PM TRIM (m)
Hungary	Vajda Papír	NA	NA	New	2018	NA	2.7
Indonesia	PT Aspex Kumbong	West Java	1	New	2018	21,000	2.7
Italy	Ariete	Salerno	1	Rebuild	2017	29,000	2.7
Italy	Cartiera della Basilica	Botticino	NA	New	2018	24,000	2.7
Italy	Lucart	Porcari, Lucca	NA	New	2018	35,000	2.8
Japan	Confidential	NA	2	Rebuild	2017	26,000	3.3
Japan	Confidential	NA	3	Rebuild	2017	22,000	2.5
Japan	Confidential	NA	7	Rebuild	2017	26,000	3.3
Japan	Confidential	NA	1	New	2018	29,000	3.3
Japan	Confidential	NA	5	New	2018	18,000	2.7
Japan	Confidential	NA	2	Rebuild	2018	26,000	3.3
Japan	Confidential	NA	3	Rebuild	2018	16,000	2.1
Japan	Confidential	Confidential	NA	New	2018	22,500	2.8
Japan	Confidential	Confidential	NA	New	2019	22,500	2.8
Mexico	Confidential	NA	1	New	2017	110tpd	2.6
Mexico	Grupo Corporative Papelera	NA	1	New	2017	110tpd	2.7
Mexico	Papel San Francisco	Mexicali	7	New	2017	30,000	2.8
Peru	Papelera Reyes	NA	4	New	2017	27,000	2.8
Poland	Polmak	NA	1	New	2017	28,800	2.8
Poland	Sofidel Spa	Ciechanów	NA	New	2018	60,000	5.2
Poland	WEPA	Piechowice	21	New	2017	35,000	2.8
Portugal	Paper Prime	Vila Velha de Rodao	1	New	2017	42,000	2.7
Portugal	Renova	Torres Novas	NA	New	2017	30,000	2.8
Russia	Hayat Kimya	Yelabuga	7	New	2019	60,000	5.6
Saudi Arabia	Al Faris	Jeddah	1	New	2018	38,000	2.8
Serbia	Drenik	NA	3	New	2018	120tpd	2.8
South Africa	Hygienic Tissue Mill	NA	2	New	2017	28,000	2.7
South Africa	Paarl Tissue Pty Ltd (Correll Tissue)	NA	1	Rebuild	2017	7,000	2.4
South Africa	Twinsaver	Kliprivier	5	New	2018	31,500	2.7
South Africa	Universal Paper Manufacturers	Ga-Rankuwa	5	New	2017	28,000	2.7
Spain	Ibertissue	NA	NA	New	2017	60,000	5.2
Spain	ICT Iberica	Burgo	NA	New	2019	60,000	5.6
Thailand	Wangpaper Co.	Bangkok	3	New	2017	17,300	2.5
UAE	Star Paper Mill	NA	1		2018	136tpd	3.6
USA	First Quality Tissue	NA	7	New	2019	NA	NA
USA	First Quality Tissue	NA	NA	New	2018	NA	NA
USA	Little Rapids	NA	3	Rebuild	2017	NA	3.4
USA	Resolute	Calhoun	NA	New	2017	60,000	5.2
USA	Sofidel America	Circleville	NA	New	2018	60,000	5.2
USA	Sofidel America	Circleville	NA	New	2018	60,000	5.2
USA	ST Tissue	Franklin, Virginia	5	Rebuild	2018	45,500	6
Vietnam	Confidential	NA	6	New	2018	20,000	3.3

# 2017/18

## P Project Survey

By Tissue World Senior Editor Helen Morris

	PM SPEED (m/min)	SUPPLIER	COMMENTS
	2200	Andritz	PrimeLineCOMPACT VI (shoe press)
	1200	GapCon Tissue	EconSOFT
	1600	Toscotec	Rebuild in Crescent Former with MODULO-PLUS
	1200	Toscotec	MODULO-PLUS
	2000	Toscotec	AHEAD-2.0S with shoe press
	1000	Kawanoe Zoki	SYD
	800	Kawanoe Zoki	SYD
	1050	Kawanoe Zoki	BF15 SYD
	1300	Kawanoe Zoki	BF15
	400	Kawanoe Zoki	BF15 towel
	1100	Kawanoe Zoki	BF12 SYD
	1000	Kawanoe Zoki	BF12 SYD
	1500	Toscotec	MODULO-PLUS with shoe press
	1500	Toscotec	MODULO-PLUS with shoe press
	2000	A.Celli	Tissue machine
	2000	A.Celli	Tissue machine
	2200	Valmet	Advantage DCT 100TS with ViscoNip press
	1799	Hergen	Complete Paper Machine EVO 12
	1600	Hergen	Complete Paper Machine EVO 12
	2000/1800	Valmet	Advantage NTT 200
	2000	Toscotec	AHEAD-2.0S
	2000	Toscotec	AHEAD-2.0S
	2000	Valmet	Advantage NTT 100
	2200	Valmet	Advantage DCT 200 with ViscoNip press
	2000	Papcel	
	1850	Recard	Crescent former
	1500	Toscotec	MODULO-PLUS
	1000	Toscotec	Rebuild in Crescent Former with MODULO
	2000	Toscotec	AHEAD-2.0S
	1600	PMP	Turn key mill (Intelli-Tissue® 1600 Advanced)
	2000/1800	Valmet	Advantage NTT 200
	2200	Valmet	Advantage DCT 200 with ViscoNip press
	1200	PMP	Intelli-Tissue® 1200 EcoEc
	1780	Recard	Crescent former
	NA	Andritz	PrimeLineTAD (Through-Air-Drying)
	NA	Valmet	Advantage ThruAir
	1830	Voith	Except for the existing Yankee Dryer, all other components will be new and based on VTM 3
	2000	Valmet	Advantage NTT 200
	2000/1800	Valmet	Advantage NTT 200
	2000/1800	Valmet	Advantage NTT 200
	915	Toscotec	Dry-end rebuilding
	1000	Kawanoe Zoki	BF-12

53

**Global tissue projects starting in 2018**

111

**2016's total projects**

37

**China-based projects in this year's survey**

3

**Mexican tissue machine projects**

# *How to triple sales in three years, by South Florida Tissue Paper Co.*

*It's listed in Inc. Magazines' top 5,000 fastest growing US companies, has tripled sales from 2014 to 2017, notched up a growth rate of 179%, and expanded the operation across all 50 states. South Florida Tissue Paper Co is a success story... oh, and it's recently beaten off the threat from Irma as the hurricane wreaked havoc across Florida. The family-owned company began life in Guatemala, where Juan Corzo Snr established the first operating facility in 1975 in Boise Cascade before years later starting his own paper mill, Papelera Internacional. In 1997 Juan Corzo II expanded the corporation to Miami creating South Florida Tissue Paper. Today, Juan Corzo III continues the family legacy as company president. He explains the company's success.*



L-r: Juan Corzo II and Juan Corzo III

**W** We are fortunate to be on Inc. Magazines top 5,000 fastest growing companies for a second year in a row. We have made a lot of investments in the last three years and seen a lot of sales growth.

We've consolidated three locations; 40,000 sq ft, 20,000 sq ft, and a third of 20,000 sq ft into one location of 100,000 sq ft in 2015. With the additional space we not only provide better service to our customers, but also produce better quality products through the use of new technology.

That includes a full palletising system for all six manufacturing lines, a multi fold line with case packers, case packers for our bathroom tissue and a complete AfH production line.

In addition, from 2014 to 2017 we have tripled our sales. This is the largest growth margin the company has seen since we started operating in 1997. The growth in sales can be attributed to several factors that include focusing on larger accounts, bettering service to our customers, producing better quality product, and cutting costs through efficiency in new machinery.

This award represents recognition of ongoing efforts by our staff who work through the day and night. It adds confidence to both our customers and suppliers that we are growing and gaining strength in the market.

In America, we see the tissue and towel industry leaving low sheet count products and shifting to higher sheet count with more paper in order to save in freight and warehouse space. We also notice that products made in the USA have a higher value.

The consumer is requesting better quality products that compare to imported paper products that do not meet American standards.

We are planning on growing and expanding throughout the United States. We currently service all 50 states, however we plan on opening operational facilities not only in Florida but throughout the country.

Our goal is to open a manufacturing facility in the north-east, the mid-west and the west coast in the next five to ten years. Our main challenges are in freight costs, imported products, and local competition.

Consumers are focusing more on private label products at the right price and products that have consistency in quality.

**We see the American tissue market shifting more to higher sheet count products as opposed to lower count sheet products. For the last decade, tissue products have been reducing in sheets per roll but we are now seeing more demand in higher sheet per roll products.**

**We are seeing a big influence in Asian and European paper manufacturers buying out American converters to step foot into the states. Some have also branched off from overseas and started operations here.**

The European tissue industry has been trying to penetrate the American market very strongly for the last 10 years by purchasing local companies; this has brought more competition to American manufacturers across the country.

We see the American tissue market shifting more to higher sheet count products as opposed to lower count sheet products. For the last decade, tissue products have been reducing in sheets per roll but we are now seeing more demand in higher sheet per roll products.

This helps manufacturers like us turn more tonnes around. We manufacture more paper per shift, which helps reduce space in warehousing, and helps lower freight cost when shipping across the states.

We also see bigger companies making big structural and merger and acquisition changes in this industry. Bigger corporations are buying out smaller converters.

We are seeing a big influence in Asian and European paper manufacturers buying out American converters to step foot into the states. Some have also branched off from overseas and started operations here.

Starting off with a lot of capital and experience we see these overseas companies starting to take a big part of the market in both AfH and retail.

As far as brand and private label products, manufacturers like ourselves don't really have a preference. If the volume is there we are willing to make what the demand asks.

We are starting to see a demand in higher quality/virgin tissue. With the addition of new paper mills across the United States we have been able to see more production on higher quality/virgin tissue instead of the traditional recycled lower quality paper. Recycled has been set for more economical products targeting discount stores.

With the economy doing better people are starting to spend more on higher quality virgin products.

Some 90% of our customers are based in the US while 7% are based in Central America and 3% are based in the Caribbean. We are constantly looking for opportunities both nationwide and overseas but our focus is within the US due to a more reliable payment standard.

It is rare for us to have an issue with a customer in the US when collecting a payment whereas overseas it can be difficult at times.

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# Events Calendar

Event	Date	Location	Website
Paper Week Canada	February 5-8, 2018	Montreal, Canada	<a href="http://www.paperweekcanada.ca">www.paperweekcanada.ca</a>
PAPER2018	March 11-13, 2018	New York, USA	<a href="http://www.gonpta.com/?page=Paper2017">http://www.gonpta.com/?page=Paper2017</a>
Reliability & Maintenance Conf. 2018	March 19-22, 2018	North Carolina, USA	<a href="http://idconevents.com/">http://idconevents.com/</a>
Tissue World Miami	March 21-23, 2018	Miami Beach, FL, USA	<a href="http://www.tissueworld.com/miami">http://www.tissueworld.com/miami</a>
PaperCon 2018	April 15-18, 2018	North Carolina, USA	<a href="http://www.papercon.org/">www.papercon.org/</a>
CIPDEX 2018	April 18-20, 2018	Shenzhen, China	<a href="http://cnhpia.org/">http://cnhpia.org/</a>
International Pulp Week	May 6-9, 2018	Vancouver, Canada	<a href="http://www.internationalpulpweek.com/">http://www.internationalpulpweek.com/</a>
ISSA/INTERCLEAN Amsterdam	May 15-18, 2018	Amsterdam	<a href="https://www.intercleanshow.com/en/amsterdam">https://www.intercleanshow.com/en/amsterdam</a>
PulPaper 2018	May 29- 31, 2018	Helsinki, Finland	<a href="http://pulpaper.messukeskus.com/">http://pulpaper.messukeskus.com/</a>
Asian Paper/Tissue World Bangkok 2018	June 6-8, 2018	Bangkok, Thailand	<a href="http://www.asianpapershow.com/">http://www.asianpapershow.com/</a>
Paper Vietnam	June 13-15, 2018	Ho Chi Minh, Vietnam	<a href="http://www.paper-vietnam.com/">http://www.paper-vietnam.com/</a>
ZELLCHEMING-Expo	June 26-28, 2018	Frankfurt, Germany	<a href="https://www.mesago.de/en/ZEX/home.htm">https://www.mesago.de/en/ZEX/home.htm</a>
Tissue World Istanbul	September 4-6, 2018	Istanbul, Turkey	<a href="http://www.tissueworld.com/istanbul/">http://www.tissueworld.com/istanbul/</a>
Labelexpo Americas 2018	September 25-27, 2018	Chicago, USA	<a href="http://www.labelexpo-americas.com/welcome-labelexpo-americas">http://www.labelexpo-americas.com/welcome-labelexpo-americas</a>
MIAC 2018	October 10-12, 2018	Lucca, Italy	<a href="http://www.miac.info/">http://www.miac.info/</a>
ISSA/INTERCLEAN North America	Oct 29-Nov 1, 2018	Dallas, TX, USA	<a href="https://www.issa.com/trade-shows/issainterclean-dallas-2018.html">https://www.issa.com/trade-shows/issainterclean-dallas-2018.html</a>
PAP-FOR	November 13 -16, 2018	St. Petersburg, Russia	<a href="https://www.papfor.com/">https://www.papfor.com/</a>
Paperex South India 2018	November 15-18, 2018	Chennai, India	<a href="http://southindia.paperex.in/">http://southindia.paperex.in/</a>
Labelexpo India 2018	November 22-25, 2018	Greater Noida, India	<a href="http://www.labelexpo-india.com/">http://www.labelexpo-india.com/</a>



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

### A. INTEGRATED TISSUE PRODUCTS MAKER

**Primary business making paper and producing:**

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

### B. JUMBO ROLL SUPPLIER

- ☐ Jumbo Roll Maker, for sale to converters

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

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

### C. TISSUE CONVERTER

**Primary business is converting jumbos and producing:**

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

### D. RETAILING AND DISTRIBUTION

- ☐ Retailer  
☐ Broker  
☐ Distributor
- ☐ Knives and blades  
☐ Folders/interfolders  
☐ Cores and coreboard  
☐ Wrapping/Packaging equipment and supplies  
☐ Transport and logistics
- ☐ Energy and Power
- ☐ Testing machines  
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