

# Tissue World

## Magazine

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## THE AMERICAS' NEW ERA FOR TISSUE

### Generations Z and Alpha – the new consumer megatrend

Plus

#### MARKETISSUES

Where to find profitable growth

#### UNVEILING THE FUTURE: SPECIAL REPORT

Research from the Tissue Pack Innovation Lab, North Carolina

#### STATE OF THE WORLD

How to survive 2024's many challenges

#### PM: TECHNICAL THEME

Demand for ever higher quality is rising

#### EXITISSUES

Absorb rising costs or increase prices – how companies  
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#### CONSUMERSPEAK

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Cover: Image showing the Generation Z and Generation Alpha consumer megatrend that is having an increasingly significant impact across the Americas' commercial markets, as reported in TWM's Latin America Regional Report.  
Image by Stefano Vuga, Founder, PurplePrint Creative, Spain/ Italy, [www.purpleprint.eu](http://www.purpleprint.eu)

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# PULP & PAPER TAD TISSUE MACHINE FOR PREMIUM PRODUCTION

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**Trajectories of national political and economic choices and trends could change dramatically, with far reaching consequences.**

Helen Morris, Senior Editor, Tissue World Magazine

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## GENERATIONS Z AND ALPHA ARE GOING TO DOMINATE CONSUMER CHOICES

One megatrend features strongly in TWM's *Latin America reports*.

Generation Z consumers, colloquially known as 'zoomers' – born in the years 1997 to 2012 – and the up-coming Generation Alpha a few years yet away from earning their own spending power, are going to have an increasingly significant impact on commercial markets.

These younger consumers already make up 48% of the total, and in the US are projected to reach 64% by 2030. They are set to dictate how industries shape their manufacturing practices, output, and delivery. They are environmentally-aware, want high hygiene standards, quality products, range of choice, prices they can handle, they shop online, buy cheaper by bulk, and are at ease with the digitalisation of the purchase journey.

They are also currently facing a variety of economic crises, uppermost of which is inflation, which is driving fundamental changes in social living habits.

So-called small households – single person habitats – constituting 62% of all, are the megatrend, the fastest-growing category. They will not buy as much, and will want smaller, handier versions of their favourite products to fit a more mobile lifestyle. TWM's reports focus on the targeted production and new consumer marketing required if the anticipated annual expenditure of \$493 per LatAm household on personal care products is to be increased, an amount one fifth that of the US and half that in western Europe.

## 2024 IS THE YEAR OF ELECTIONS ... WHO WINS MATTERS

It comes as a shock, given all the other uncertainties in current world events, to realise that 2024 will be the year of electioneering and voting.

The US, Russia, Ukraine, Europe and elsewhere will see changes. Trajectories of national political and economic choices and trends could change dramatically, with far reaching consequences.

Antonia Colibășanu, Chief Operating Officer and Senior Geopolitical Analyst at Geopolitical Futures, is well known to Tissue World tradeshow attendees. In this magazine's *Special Report, Geopolitical Analysis: State of the World 2024*, she explores factors to help mitigate risks – agility, innovation, financial stability, and customer focus. Inevitably though, she adds, even should greater stability prevail, the bill will come due on the post-pandemic recovery, the social costs of warfare, and society's green transition and digitalisation.

## QUOTE OF THE EDITION

*"It is incredible to see how climate change is playing a role in our sector. We are seeing floods, extreme cold weather. A lot of these factors are affecting production, and they didn't before."*

Leonardo Grimaldi, Suzano's Head of Global Pulp Sales, Marketing and Logistics, talks extensively in *Operations Report* about the issues facing tissue and pulp production in LatAm, and globally.



# PROFITABLE GROWTH IN THE CONSUMER TISSUE VALUE CHAIN – WHERE TO LOOK?

Tissue producers are in a solid position, but the example of retailers expanding their private label offering shows genuine interest to incorporate margins currently generated in the upstream business. By AFRY Management Consulting’s Hampus Mörner, Manager, Christoph Euringer, Principal, and Tino Mäkelä, Analyst.



Ask any Chief Executive or salesperson about their competitive advantage and you will hear very different accounts on why their company is the best, the superior, or at least the one with the best outlook going forward. Citing most value-add products, most efficient production, best service level best

assets, etc. And within their individual sector, they might even be the leading company. But at the end of the day, there is a limited amount of money available in any value chain – and finally only the distribution of profits should be the litmus test of who is performing best.

ROCE in % (weighted average 2010-2022)

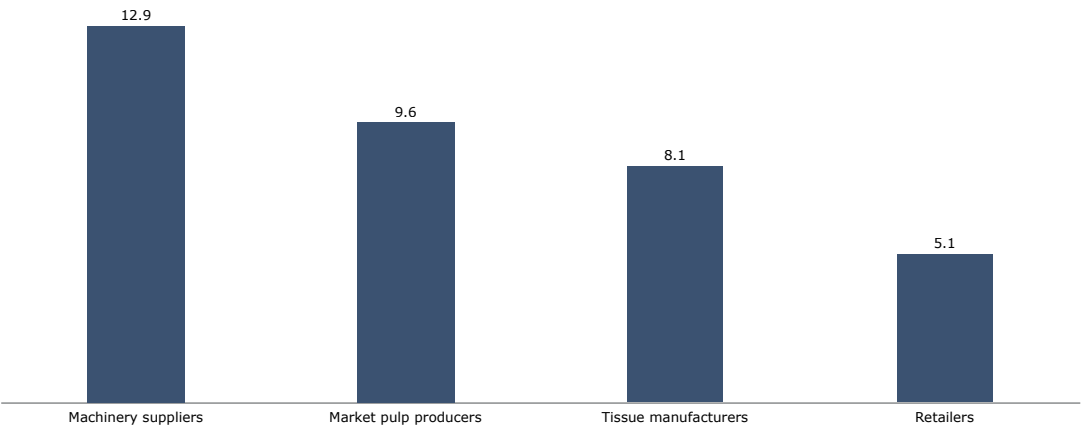


Figure 1: ROCE 2010-2022, weighted average (by turnover) per company group. European focus. AFRY analysis based on Orbis Bureau van Dijk data, 34 companies

We had a look at the tissue value chain, its key suppliers of fibre and machinery, and their main clientele – the big retailers and discounters. In short, the tissue industry has performed well, although the gap of value creation between the lower and higher end of company groups is notable. And yet the key question for the tissue industry's future is – how can it further improve its situation?

The simplified consumer tissue value chain holds four main company groups to enable the finished goods to end up at a consumer: pulp manufacturers, tissue paper producers, retailers, and machinery suppliers (including converting, pulp and paper and machinery equipment). Each group can be further divided and described in detail. For instance, the stage consisting of tissue paper production can be divided into integrated paper producers (with converting capabilities) and independent converters (sourcing the base paper externally). Physical stores and traditional retailers may as well be replaced by e-commerce platforms. Moving forward, we will stay on the simplified level of breakdown.

Figure 1 shows the average of ROCE between 2010 – 2022 as weighted average (by turnover) for the selected steps in the value chain. Numbers are taken from the highest 'legal entity' level of the respective companies and basically also cover non-tissue businesses. Paper machine producers also sell packaging paper machines, tissue producers might have a non-woven business, and retailers have a very wide assortment. Still, on this helicopter level it provides a robust picture for the assessment of companies which are able to generate the highest profits

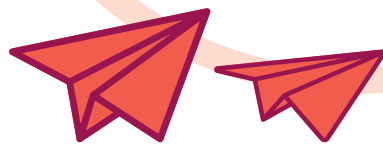
Reading from the comparison in figure 1, the gap between the highest (machinery) and lowest level (retail) of value creation is notable. From the tissue industry perspective, the challenge comes more from the suppliers – they can achieve higher profitability levels – while retailers instead face stiff competition among themselves, and within this comparison find themselves in the least comfortable situation.

## WHAT ARE THE CHALLENGES WITHIN EACH OF THESE GROUPS?

**Machinery suppliers:** In Europe, this is a group of companies that have experienced a trend of growing consolidation historically, and where technology development has been led by few companies. Many of the global top-tier players within this sector originate from Europe, which are leading in innovation and provide the highest technology level.

There have been numerous interesting acquisitions during the past few years, not only

**From the tissue industry perspective, the challenge comes more from the suppliers – they can achieve higher profitability levels – while retailers instead face stiff competition among themselves.**



amongst the paper machinery and converting machinery suppliers, but also recently across these two sub-groups. Next to consolidation, the most recent acquisitions have also set a direction towards more complete end-to-end offerings where fewer parties are involved to fulfill an order for a complete line from stock preparation to packaging line. Technologies and solutions simply come under the control of fewer players.

Another aspect is the high thresholds to enter as a new machinery supplier. The business is capital intensive and being at the forefront of technology development and intellectual property is a decisive factor. Lastly, maintenance, trainings, diagnostics, and any other services which the incumbents can supply next to pure machinery purchases are raising the entry bar further. Machinery suppliers have been successful in meeting the high demand for quality, energy efficiency, and strict environmental policies in Europe through their high – and specialised machinery know-how. This also carries a premium price.

**Pulp suppliers:** As the structural decline in graphic papers continues, tissue paper has become the single most important end-use segment for the market pulp sector. Essentially, this means that growth opportunities for pulp producers are more connected to the success of tissue paper when compared to the past.

Just as with the machinery suppliers, a positive aspect within the pulp sector is the increased consolidation witnessed in the last decades. Most global production assets are now under the control

of a few leading corporations. Additionally, currently known capacity expansions are led by the top producers. Customers are facing fewer sourcing options and less bargaining power when buying pulp. Still, this consolidation and its impact on pricing power should not be overemphasised. It's worth remembering that pulp remains a cyclical business and prices were not kept from falling in the previous cycle.

Other supportive factors that have led to a superior value creation, is an efficient resource management through land ownership enabling access to competitively priced fibre, which is then converted to pulp in new mega sites. Fewer and fewer white spots on the global map show how the development of new pulp mills is becoming more difficult. The needed access to land and a massive CAPEX required for new modern "mega-mills" increases the thresholds. But it also drives producers to maximise economies of scale on the existing plots – and successful value creation.

**Retailers:** Reading from the comparison in Figure 1, this has been the company group creating the least value historically. Retail and grocery stores typically require high priced real estate plots in close surroundings to consumers. Much of the store area is required for traffic of consumer rather than shelves generating revenue. The number of goods that major retailers carry and handle can easily be counted in thousands, each requiring different space, shelf time and indirect cost to finally generate value.

Tissue articles make up a fraction of the total number of articles and are not necessarily in the largest focus. On the other hand, tissue products are bulky and demand substantial shelf space. But as they are an everyday necessity, tissue paper products can, among other consumer goods, be a determining factor to drive traffic and ultimately consumers to stores.

Consequently, tissue is not only a product that claims much attention in stores but also a product any retailer is expected to offer. Given the importance for such an important item, where the cost of producing is much tied to the fluctuations in fibre and energy, and thus price volatility, retailers have for many years been tough negotiators to protect the value created from these vital articles.

They have also pushed for more private label (PL) products on their shelves. The growth of private label has been distinct in the last decade and reading from consumer panels from last year and onwards, there has been a growing trend in the form of more attention on "affordable" or "discount oriented" brands on the costs of tissue producer's premium brands. It is fair assumption that the tissue industry might expect

more pressure and push for PL as retailers seek to improve its value creation.

**Tissue manufacturers:** The group of tissue manufacturers comes out as the second lowest in the above comparison. Still, it is well within the range and at a level that can be considered as acceptable. On the other hand, it is also at notable levels below machinery and pulp.

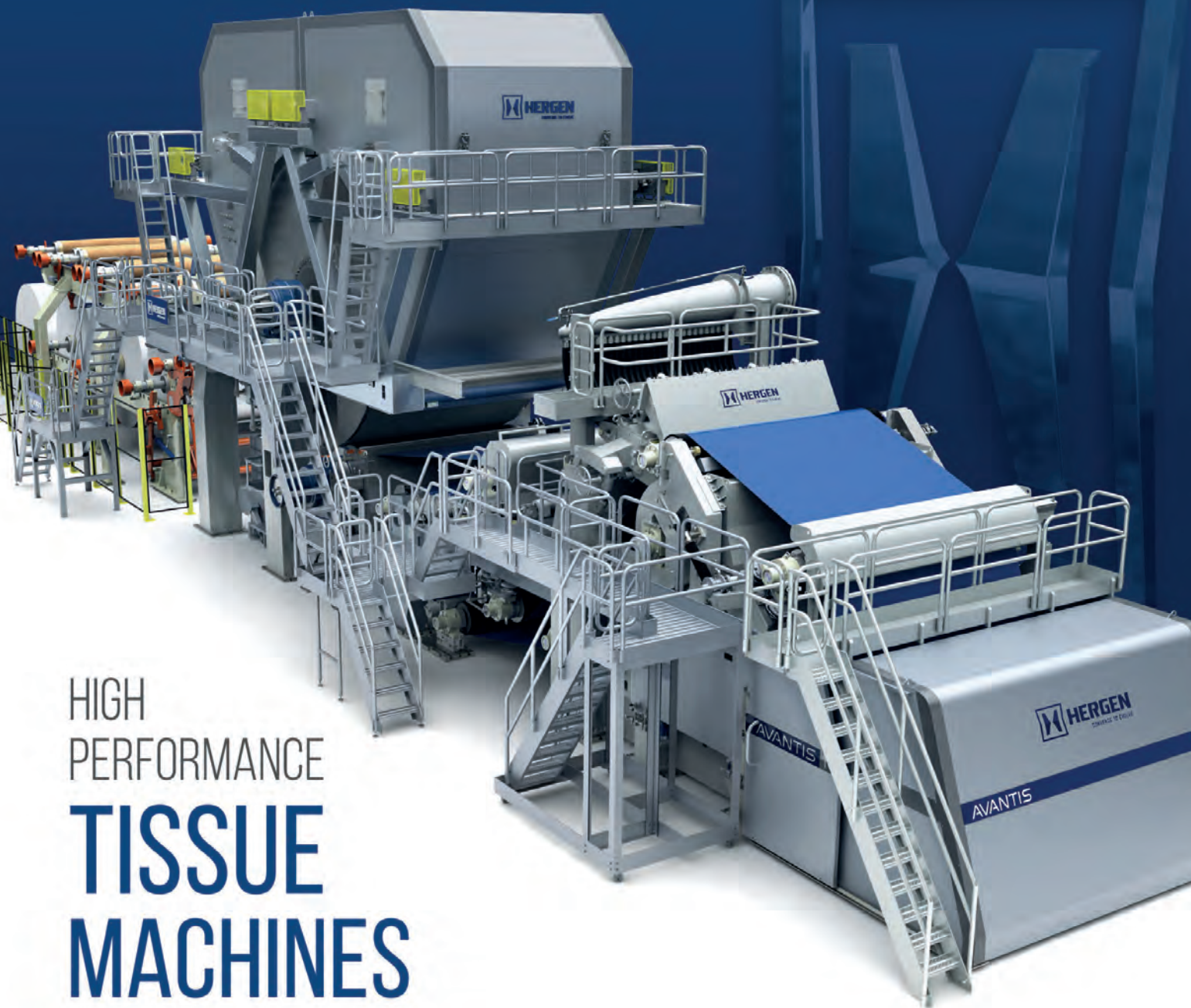
Unlike machinery and pulp, the European tissue sector has been the subject of fragmentation instead of consolidation during the last decade. Resilient, stable demand and bulky products make local presence key and have been supportive factors for investments by numerous stakeholders of varying scale. The total manufacturing footprint of the producers spans between domestic to global players. Additionally, a prolonged period of low interest rates has lowered the thresholds to enter until recently. Essentially, competition is up, which in combination with an increased presence of sizeable discounters in the retail sector seeking higher value creation, has made it more challenging to sustain long-term value creation.

Tissue producers are in a solid position but the example of retailers expanding their private label offering does show their genuine interest to incorporate margins currently generated in the upstream business. And as the suppliers are further improving their position, one of the key questions for the years to come is if we are also going to see higher levels of consolidation in the tissue industry, and what that means for the whole supply chain.

**Tissue producers are in a solid position but the example of retailers expanding their private label offering does shows their genuine interest to incorporate margins currently generated in the upstream business.**







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- ★ Latin America Papermakers Conference 2023 - Latampaper Achievement Awards



Awards and recognition received from Paper Associations and Specialized Media.



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# GLOBAL NEWS UPDATE

A roundup of news from across the global tissue industry. To get the very latest news go to [www.tissueworldmagazine.com](http://www.tissueworldmagazine.com)



**Start-up team:** Jumbo Centre and Tescotec colleagues at Jumbo Centre's mill in Johannesburg

## SOUTH AFRICA

### JUMBO CENTRE BOOSTS CAPACITY BY 30,000TPY WITH TM START-UP

South Africa's Jumbo Centre has started-up a Tescotec-supplied AHEAD 1.8 tissue line at its site in Johannesburg.

The machine has a sheet trim width of 2.7m, an operating speed of 1,800m/min and a production capacity of more than 30,000 tpy.

It is equipped with a new generation design TT NextPress shoe press, a third-generation TT SYD Steel Yankee Dryer, and high-efficiency TT Hood

The scope of supply covers the complete production line from the bale handling and stock preparation systems to the electrification and control system of the tissue machine.

Itzik Nikfard and Rafi Nikfard, Directors of Jumbo Centre, said: "This investment marks a new important stage of expansion for our business.

"The choice of technology is key in supporting the continuous growth and success of our SnowSoft brand."

## AMERICA

### GP ANNOUNCES \$150M CONSUMER TISSUE INVESTMENT

Georgia-Pacific (GP) has announced a \$150m investment in its retail consumer tissue business at its mill in Halsey, Oregon.

Investments to the plant will increase production capacity for high quality bath tissue, with initial production expected in 2025.

By the end of this project, the company will have invested over \$200m in paper machine and converting assets at the facility since 2022.

Vivek Joshi, President of the retail tissue, towel, and napkin business for GP, said: "It is a clear indication of Georgia-Pacific's focus on growing our premium tissue business and creating products that consumers value."

The Halsey mill makes bath tissue and paper towels for the consumer market, and the investment will increase the production of its premium tissue offerings such as Quilted Northern Ultra Plush tissue, as well as customer branded tissue.

## TÜRKİYE

### EUROPAP TEZOL KAĞIT BOOSTS HIGH QUALITY TISSUE CAPACITY WITH TM START-UP

Europap Tezol Kağıt has started-up a Toscotec-supplied AHEAD 2.2 tissue machine at its integrated production facility in Mersin, Türkiye. The line features a sheet trim width of 2.9m, has an operating speed of 2,100m/min, and an annual production capacity of over 40,000 tons.

It is equipped with Toscotec's upgraded design TT NextPress shoe press, a third-generation TT SYD, TT BulkyReel for optimal preservation of bulk and softness, and high efficiency TT Hood with the automatic balancing system TT DryingEquilibrium. The project also included two OPTIMA slitter rewinders, with the first already in operation, and the second scheduled for installation soon. Ahmet Şenyaşa, Factories Director at Europap Tezol Kağıt, said: "We are confident that this state-of-the-art tissue line will allow us to meet the high-quality standards of our customer base, especially in terms of the softness and hand feel of our super-prime brands."

### PCMC AND UNITEK PAPER & CHEMICALS FORM STRATEGIC ALLIANCE


PCMC has entered into a strategic alliance with Istanbul-based Unitek Paper & Chemicals in order to further its collaboration with Türkiye-based pulp and paper companies. Unitek Paper & Chemicals was founded by Umit Coskuner in 1999 as a consulting and engineering company designed to serve Türkiye's paper industry and represent international companies in the global pulp and paper sector.

PCMC said the new agreement will enable it, Unitek, and local tissue companies, to grow under a new strategic framework.

## POLAND

### VELVET CARE ACQUIRED BY PARTNERS GROUP

Swiss-based global private equity firm Partners Group is to acquire Polish-headquartered tissue manufacturer Velvet Care from Abris Capital Partners. Velvet Care is one of the largest manufacturers of hygiene tissue products in Central Europe. The acquisition takes place after several years of growth, which has included announcing its third paper machine in five years as part of a PLN364m investment. That is on the back of more than 60% production capacity increase to the



**Sun Paper's household paper project is planned to be constructed in two phases, mainly including production workshops, post-processing facilities, warehousing and other production auxiliary facilities.**

business following the start-up of TM8, the plant's second Valmet-supplied Advantage DCT line, in June 2022. In 2020 Velvet Care also acquired Moracell, Czechia's largest producer of toilet paper and paper towels, a move which opened up opportunities for the business in Czechia and Slovakia.

## CHINA

### SUN PAPER GROUP BOOSTS CAPACITY WITH TM INVESTMENT

China's Sun Paper Group has renewed its contract for the supply of three Baotuo paper machines to be installed at its Nanning Park production base in the Guangxi region. A year after two Baotuo paper machines were put into production at Sun Paper's Beihai Park base, the company has again signed a contract for three additional Baotuo high-speed crescent former tissue machines to be installed at Nanning Park in the next few years. The paper machine model is BC1800-2850 and it has a design speed of 1,800m/min and a width of 2.8m.

The investment means that 300,000tpy of household paper and converting will be added at the plant. Sun Paper's household paper project in Nanning is planned to be constructed in two phases, mainly including production workshops, post-processing facilities, warehousing and other production auxiliary facilities. The first phase of the project is scheduled to be completed by the end of 2024.



## BRAZIL

### SUZANO SIGNS UP ANDRITZ FOR MAINTENANCE ON NEW RIBAS DO RIO PARDO PLANT

Suzano has invested in a five-year contract with Andritz that will cover maintenance modules for its new mill currently being constructed in Ribas do Rio Pardo. With an annual production capacity of 2.55m tons, the supplier said Suzano's new mill will be the world's largest plant with a single eucalyptus production line. The contract covers several maintenance modules for all process islands and equipment of the new mill, which is scheduled to start up by June 2024.

## ITALY

### ACE LAUNCHES BUSINESS DIVISION ACE TISSUE TECHNOLOGIES

Italy's ACE has diversified its product offering after opening a new company - ACE Tissue Technologies (ACE TT). Located in Pescia, Lucca, the new business division is dedicated to the manufacture of patented dust removal systems. Chief Executive Daniele Barbui said to TWM: "This was the necessary step in order to better organise the internal production processes and to enhance the specialisation in each specific sector by positioning suitable and prepared personnel."

He added that ACE TT is structured to provide its customers "with 360° service", starting from the supervision of the lines to the study and design of suitable dedusting systems until their installation.

"In the tissue industry, ACE T.T. is now able to supply customised systems for paper machines, rewinders, converting lines, interfolders, napkin and handkerchief machines. Meanwhile, ACE Dedusting plants act directly on the paper, are easy to use, versatile, and with the possibility of modular expansion even after their installation. They are practically maintenance-free, and the return on investment is extremely rapid if we consider the advantages that their use entails."

He added that the company's patented MEA-X technology is based on the combined action of aerodynamic flows and antistatic devices, and "guarantees higher levels of safety in the control of electrostatic charges and superior dust removal performance (even over 60%) compared to traditional suction systems."

The business also has an office in China, ACE (Suzhou) Mechanical Equipment.

## GLOBAL

### INFINITY TARGETS INCREASED AUTOMATION WITH LAUNCH OF R10SW PALLETISER

Infinity Machine & Engineering Corp. has further expanded its roster of automated machinery to cover the end of the production line by launching its latest palletiser, the R10SW. Introduced into the global tissue market in response to customer demand, the R10SW palletiser can be integrated with Infinity packaging lines, which the company said enables its machinery to automate every step of the tissue production process after the log saw.

Gregory Sense, Marketing Coordinator, Infinity, said: "A key aspect of the R10SW palletiser is its modularity. The R10SW is made up of modular palletiser sections that can be arranged into countless different layouts to accommodate production requirements, as well as facility limitations. The flexibility created by these palletiser sections make it perfect for a multitude of product lines, from single product, to large-scale, multi-line operations."

He added that the palletiser segments offered include automatic slip sheet placement, integrated labelling, and fully automatic, fully servo stretch wrapping.



**Automation at every step:** Infinity further expands its roster of automated machinery with the launch of its latest palletiser, the R10SW.



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# TISSUE WORLD LATIN AMERICA 2023-2024: ECONOMIC HEADWINDS IMPACT TISSUE CONSUMPTION GROWTH

Changing fibre prices, exchange rates, and environmental regulations present some participants advantages, new challenges, as well as opportunities. Report by Bruce Janda, Senior Consultant, Fisher International.



Latin America is defined more by a shared Latin culture than strict geographical boundaries. In our previous column for the Nov/Dec TWM, our focus was directed towards Brazil as the singular Portuguese-speaking section. This leaves a predominantly Spanish speaking range from Mexico in North America to Chile, facing Antarctica for purposes of this report. Several smaller countries use French, Dutch, or English as their official languages. It is essential to note that Hispanic culture is not uniform, with significant variations in food, music, and societal aspects across countries. All of these factors should be expected to influence tissue demand.

Figure 1 shows a map of the Americas with a heatmap for Latin American tissue production. Brazil was included on the map as a reference to the previous report. Mexico and Brazil, coloured red, show as the largest producers, followed by Colombia and Argentina. Figure 7 also shows Latin American tissue production in a pie chart, ranking the relative production volumes without Brazil. Cuba, the Dominican Republic, and Trinidad & Tobago are identified tissue producers in the ResourceWise database.

Given the many small islands, determining the countries included in Latin America for economic and trade statistics poses a challenge. A comprehensive overview of economic indicators influencing or impeding the development of tissue consumption is depicted in Figure 2, showcasing the trend in Latin American population and GDP growth.

Excluding Brazil, the Latin American population exceeds that of Brazil by more than twice. The blue line representing the average GDP per capita shows significant disruptions during the Covid-19 pandemic. While the average consumer purchasing power aligns with Brazil's, this average hides a lot of variation in income levels. Climate change affecting agriculture combined with economic and political disruption has driven migration to North America, resulting in instability that continues to frustrate tissue consumption development. The economic headwinds on tissue consumption growth are shown in Figure 2. The average unemployment trend appears reasonable but hides several significant outliers. The average inflation peaked at 2,100% in 2018 and is arithmetically correct, but the massive impact of several countries' runaway inflation distorts the average. Any tissue demand study must consider the different consumer conditions in neighbouring countries.

These regional averages offer limited guidance, so the individual country's economic statistics are also shown in Table 1. The FisherSolve economic and trade databases encompass the Latin American countries featured in the report, with the exception of Cuba. Although tissue production data for Cuba is available in other sections of this report, the economic data is taken from the World Factbook ([www.cia.gov/the-world-factbook/countries/cuba/](http://www.cia.gov/the-world-factbook/countries/cuba/)). The five-year compound annual growth rate (CAGR) is included for both income and population growth.



**TABLE 1: LATIN AMERICA ECONOMIC STATISTICS ESTIMATED 2023 VALUES**

Latin America	GDP PPP/ Capita USD \$	GDP 5yr. CAGR	Population Millions	Population 5 yr. CAGR	Inflatio	Unemploy. %
Antigua	25,449	2.22%	0.1	1.22%	5.03	NA
Argentina	26,506	2.87%	46.8	0.80%	<b>121.67</b>	7.35
Aruba	51,352	5.59%	0.1	-0.37%	4.46	8.47
Bahamas	44,950	3.65%	0.4	0.97%	3.88	8.47
Barbados	18,738	2.91%	0.3	0.21%	5.22	8.79
Belize	11,166	4.49%	0.5	2.02%	3.66	10.12
Bolivia	10,340	2.52%	12.1	1.13%	3.03	4.9
Chile	29,935	3.74%	20	0.88%	7.78	8.83
Colombia	19,482	4.50%	52.2	1.09%	11.39	10.8
Costa Rica	26,809	4.87%	5.3	0.79%	0.66	9.8
Cuba <sup>1</sup>	12,300	1.25%	10.9	0.19%	5.50	2.76
Dominica	14,348	2.35%	0.1	0.55%	6.2	NA
Dominican Republic	25,523	5.10%	10.7	0.70%	4.91	6.2
Ecuador	13,285	2.18%	18.3	1.12%	2.35	3.8
El Salvador	11,717	4.49%	6.4	0.25%	4.43	5.5
Grenada	20,195	2.81%	0.1	0.35%	3.63	NA
Guatemala	10,595	4.41%	19	1.57%	6.33	NA
Guyana	61,099	35.04%	0.8	0.23%	5.48	NA
Haiti	3,186	0.44%	12.2	1.10%	43.6	NA
Honduras	7,163	3.73%	10.5	1.40%	6.37	8.08
Jamaica	12,995	3.40%	2.7	0.09%	6.5	NA
Mexico	24,976	3.26%	131.2	0.72%	5.54	2.89
Nicaragua	7,642	5.96%	6.7	0.37%	9.09	7.16
Panama	42,738	4.50%	4.5	1.09%	1.52	8
Paraguay	15,533	3.70%	7.6	1.10%	4.73	6.19
Peru	15,894	3.42%	34.5	0.80%	6.51	7.55
St. Kitts/Nevis	29,893	1.74%	0.1	0.69%	2.91	NA
St. Lucia	18,973	3.21%	0.2	0.33%	3.65	NA
St. Vincent & Grenadines	17,840	4.93%	0.1	0.00%	4.44	NA
Suriname	18,311	-1.04%	0.6	0.85%	<b>53.27</b>	10.6
Trinidad and Tobago	30,719	1.53%	1.4	0.37%	5.42	NA
Uruguay	28,984	3.91%	3.6	0.27%	6.09	8.13
Venezuela	7,985	-0.45%	26.5	-0.94%	<b>359.99</b>	NA

<sup>1</sup> Cuba data from The World Factbook. GDP data is 2016, Population total is 2023 estimate, inflation and unemployment data from 2021.

The inflation numbers for Argentina, Haiti, Suriname, and Venezuela are highlighted in bold. Venezuelan inflation at 359.99% in 2023 is much lower than in previous years, which was distorting Figure 3. Most other countries are doing fine with inflation. Haiti has very low personal income. Other low-income countries are Honduras, Nicaragua, and Venezuela. Countries like Aruba, the Bahamas, and Guyana would be considered rich. Guyana stands out with recent income growth.

The tissue import trend to the Latin American region is shown in Figure 4, and the tissue export trend is shown in Figure 5. This import and export data considers Brazil as an external source or destination. Tissue imports and exports are roughly in balance for Latin America. Most tissue imports come from within Latin America or from North America (Canada and US). The same can be said for exports, but a trend toward more tissue from the Asia-Pacific region has recently developed. With tissue imports and exports roughly balanced, the expansion of tissue supply depends on local tissue machine capacity and capability development. Figure 6 depicts the fluctuation trend in the addition and removal of tissue machines within the Latin American tissue machine fleet.

From 2007-2025, a net increase of approximately 45 machines is anticipated. However, only about 18 old machines were removed during this period, a number lower than what would be expected in a healthy system. The newly added machines have significantly greater capacity than the old ones remaining or removed. Several countries have made significant increases in their tissue capacity during 2007-2025. Bolivia, for example, experienced a CAGR of almost 16%, Guatemala was slightly under 9%, and Peru saw growth of less than 8%.

Relative tissue capacity by country is shown in Figure 7. Mexico's tissue is just slightly smaller than Brazil's, but its capacity is three-four times that of Argentina's as the next largest producer in Latin America. Some countries, such as Venezuela, appear to be shrinking in tissue capacity.

Latin American tissue mill sites are mostly integrated with recycled fiber, as shown in Figure 8. Virgin fiber integration is minimal compared to North America or even Brazil. Unsurprisingly, recycled integrated sites mostly use recovered papers in deinked bleached, unbleached, and unbleached not-deinked processes. Eucalyptus hardwood is the primary virgin pulp source, followed by southern softwood.

Latin American tissue production broken down by finished product format is seen in Figure 10. Consumer bath tissue comprises 61% of the total output, followed by 14% production in consumer towels. Growing more tissue consumption requires increasing towel use in the home. The instability of the region appears to deter this growth. Latin America has experienced a slight adoption of advanced tissue technology. While Colombia has some advanced capacity, Mexico is much more like the rest of North America in the deployment of advanced tissue machines of several classes. Mexico's development is supported by the trade partnerships



Figure 1: Latin America Tissue Production Heatmap

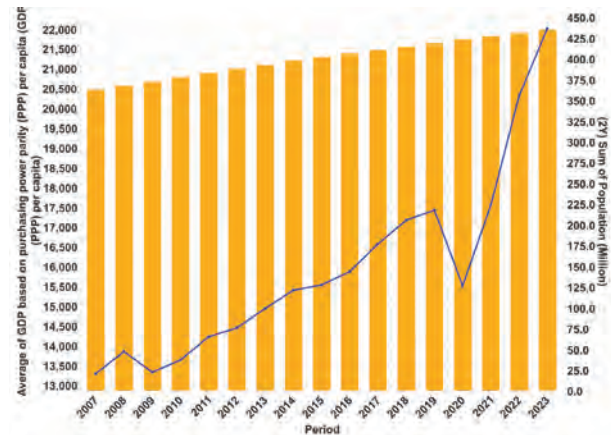


Figure 2: Latin America Population and GDP/Capita Trend

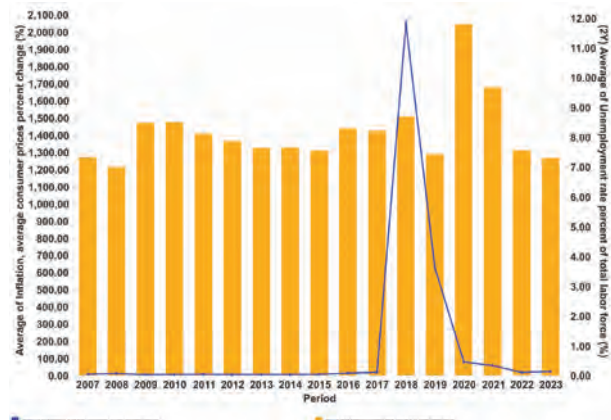


Figure 3: Latin America Inflation and Unemployment Trend

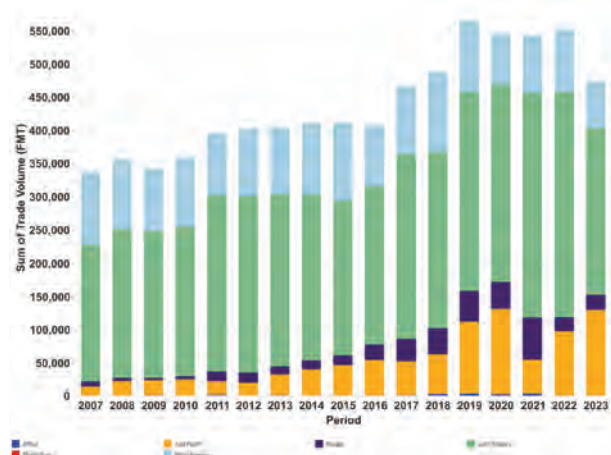


Figure 4: Latin America Tissue Imports Trend by Source Region



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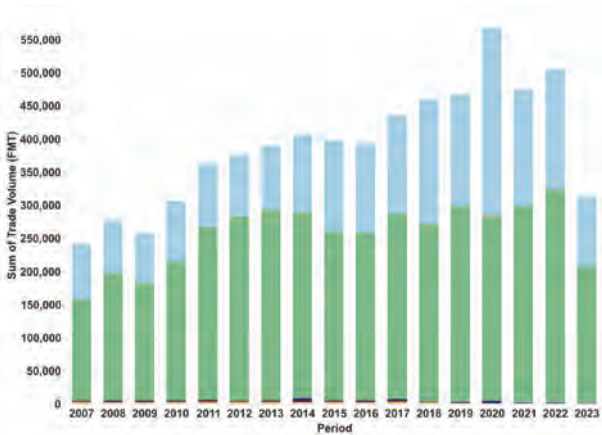


Figure 5: Latin America Tissue Exports Trend by Source Region



Figure 6: Latin America Tissue Machine Count Changes

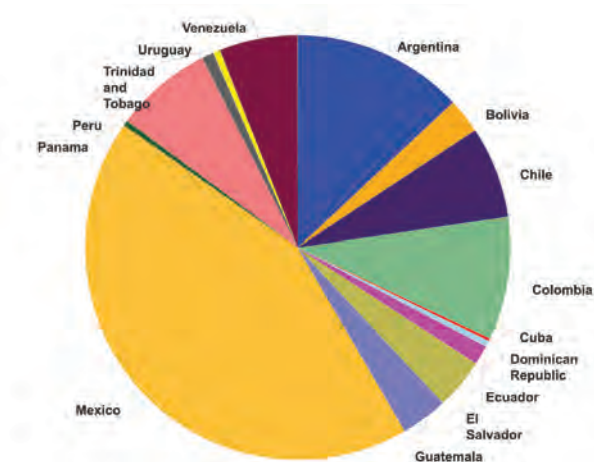


Figure 7: Latin America Tissue Production in America Tissue Site Pulp Integration

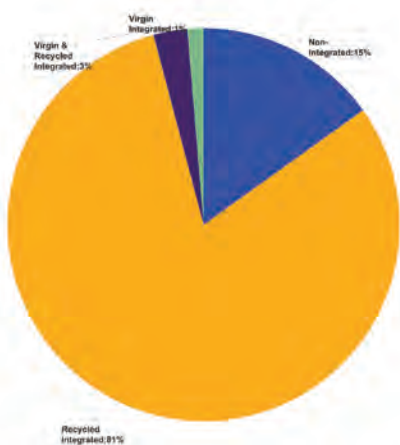


Figure 8: Latin America Tissue Site Pulp Integration

with Canada, the US, and the Mexico City urban market for advanced tissue products.

The average quality of Latin America's tissue fleet by countries is shown in Figure 12. This chart plots the average technical age of the machines on the X-axis against the average speed on the Y-axis. The size of each country's bubble represents its total tissue capacity. The most recently expanding capacity in Bolivia, Guatemala, and Peru has resulted in relatively up-to-date machines, but only Guatemala has average speeds above Mexico. Argentina has been modernising recently, while Mexico appears to have slowed new capacity.

The relative average cost of making a finished ton of tissue for the Latin American countries is shown in Figure 13. Brazil was added back into this analysis to support local comparison. The height of each country's bar represents the cash cost of production, and the width of each bar is the relative tissue capacity. The coloured bands for each bar represent the costs of raw fibre material, market pulp, chemicals, energy, labour, materials, overhead, and credits. Venezuela and Argentina have the lowest cost set, but their very high inflation rates can make direct cost comparisons problematic at any point in time. Conversely, Mexico has relatively high energy costs compared to most of Latin America. These are average costs, and individual machine costs will diverge considerably.

A snapshot of the average tissue machine and mill viability is shown in Figure 14. In this case, the cost of the bar height is detailed by viability factors, where cost is only one of the factors. The legend shows these factors as capital required, cost, grade risk, internal company risk, competitiveness, size, technical age, and tons per unit trim. Most countries do well in this comparison, positioned at the lower end of this set. However, El Salvador, Venezuela, Uruguay, the Dominican Republic, Ecuador, and Panama are in the high-risk group with lower viability.

Figure 15 displays carbon emissions per finished metric ton, specifically focusing on emissions from tissue machines on-site and excluding pulp production at integrated sites. Scope 1 and 2 emissions were chosen as they are most likely to be included in a carbon analysis by potential consumers. The colours stacked in each bar represent the source of each emission. The two key areas are fossil fuel consumption on-site for power and heat during tissue drying, as well as the fossil fuel content of electricity grid production.

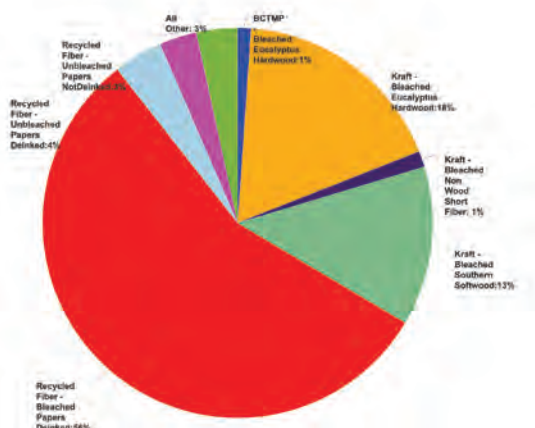
Uruguay and Brazil exhibit the best results in this chart. Trinidad and Tobago, Panama, and the Dominican Republic fare less favourably. Carbon emissions are influenced not only by the type of electric grid power or mill heat source, ranging from coal to natural gas, but also by the energy efficiency of each machine in producing the same ton of tissue.

Latin America maintains a relatively balanced trade position, with most imports and exports occurring within the region or with North America. Notably, there is a rising trend in imports from Asia. While the installation of

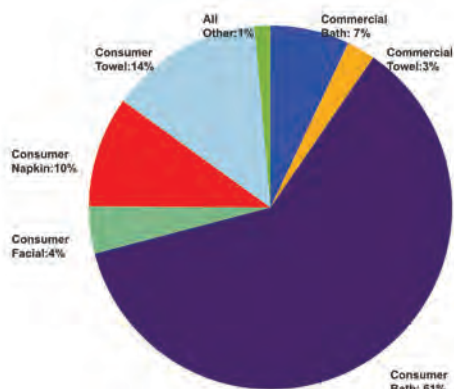


new machines and technology is underway, the removal of old machines seems to be occurring at a lower rate. The diverse economic and political disruptions specific to several countries pose challenges in comparing costs and hinder the development of regional tissue markets and increased consumer demand.

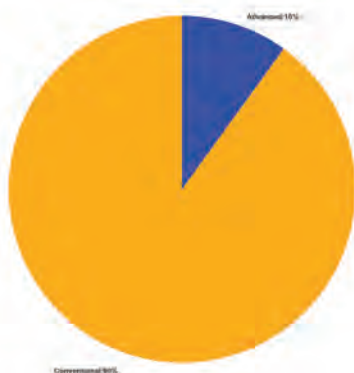
Analysis of competitive position requires specifics of tissue producers and individual machines. This article presents a static summary of Latin America's tissue industry today. The region's tissue mills will continue to change hands and consolidate, and neighbouring countries may invest in tissue-making capacity, affecting Latin America's imports and exports.



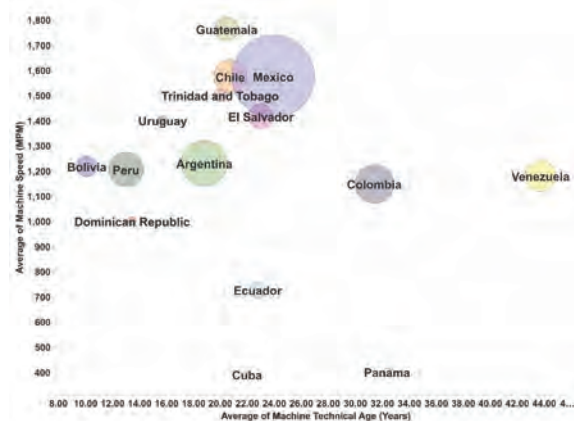
**Figure 9: Latin America Tissue Furnish**



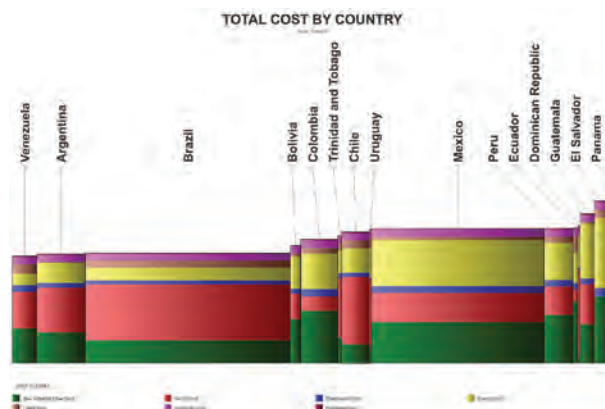
**Figure 10: Latin America Finished Products**



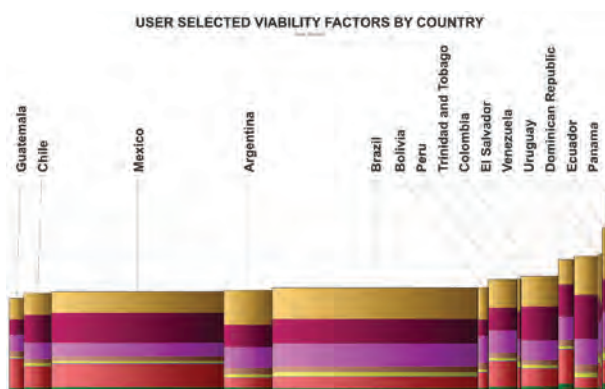
**Figure 11: Latin America Advanced Tissue Technology**



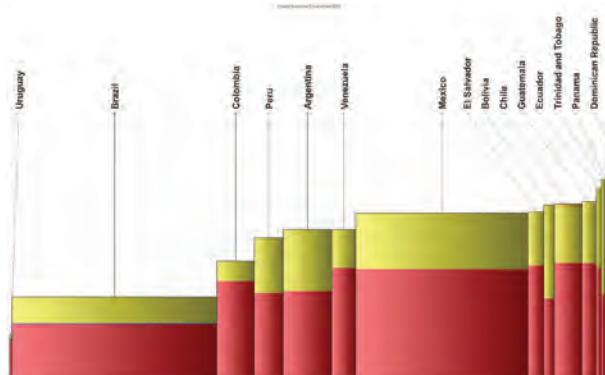
**Figure 12: Latin America Tissue Machine Quality**



**Figure 13: Latin America Average Cash Cost by Country**



**Figure 14: Latin America Tissue Production Viability**



**Figure 15: Latin America Tissue Production Carbon Emissions**

# CONSUMERS WANT SUSTAINABILITY – BUT THE COST-OF-LIVING CRISIS MEANS IT MUST BE AT THE RIGHT PRICE



Understanding the complex drivers behind consumer choices has become indispensable. Report by Jorge Araya, Santiago-based Consultant Tissue & Hygiene, Euromonitor International.

In recent years, countries across Latin America have been immersed in a complex economic scenario that has proven challenging to navigate.

The low economic growth in the region's key markets has led to a contraction in the consumption of various categories, directly impacting several industries in the fast-moving consumer goods sector, including consumer tissue. Without intending to see the glass as half empty, the projections for 2024 are modest to moderate, posing a challenge to overcome in the new consumer reality.

## THE INFLATIONARY FACTOR – AND THE ROLLERCOASTER OF RISING PRICES

Undoubtedly, inflation, as reflected in the prices of consumer goods, has had a significant impact on the performance of the industry. In 2022, it reached 15% in Latin America, with Argentina, Chile, and Colombia being the markets with the highest recorded rates during that period.

Currently, although inflation tends to decrease, it persists above pre-pandemic levels and central banks' targets. Additionally, the sluggish growth of major economies and interest rates, directly impacting companies' investment capacity and available working capital crucial for job creation, further compounds concerns.

The current cost-of-living crisis has brought about a change in purchasing priorities, forcing increasing

numbers of consumers to prioritise quality and value over attributes such as sustainability. This scenario amplifies consumers' sensitivity to any price changes and encourages them to contemplate switching to private label brands in pursuit of more cost-effective alternatives.

The Euromonitor Consumer Lifestyles Survey 2023 reveals a significant shift in the behaviour of young Latin American individuals aged 18 to 29. This demographic shows a notable inclination towards prioritising private labels over established brands in the next 12 months. Surprisingly, this preference is not directly linked to income levels, as individuals with medium to high incomes within this age group display a greater openness to considering private label alternatives. This trend reflects a nuanced change in consumer values, indicating that factors beyond financial constraints influence preferences toward quality and value rather than solely relying on well-known brands. As consumer choices evolve, the connection between age, mindset, and purchasing decisions becomes increasingly apparent, reshaping market dynamics.

## THE LATIN AMERICAN CONSUMERS

Understanding the intricate characteristics and consumption patterns of Latin American consumers is indispensable for formulating effective strategies to enhance the penetration and sales of tissue products. The significant prevalence of small



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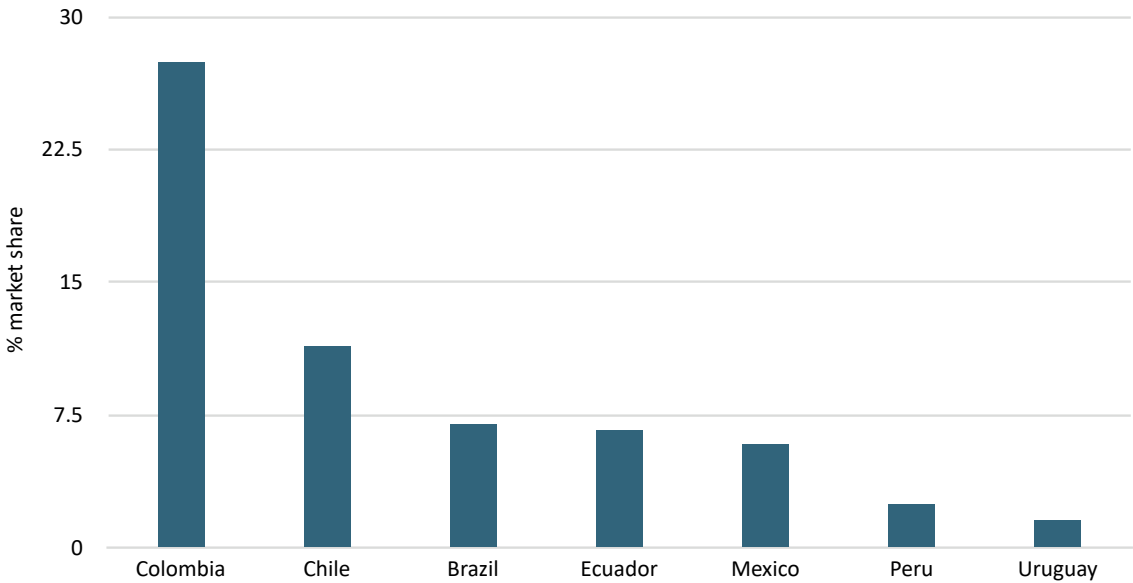
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[ima.it/tissueandnonwoven/tmc](http://ima.it/tissueandnonwoven/tmc)

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Retail Tissue: Private Label Market Share in Retail Value Sales, Key Latin American Markets, 2022



Source: Euromonitor International – Tissue & Hygiene 2023 Research Edition published in February 2023

households, constituting 62% of the region’s households, and the escalating trend of single-person households as the fastest-growing category, emphasize the necessity for tailored approaches. Furthermore, the dominance of the Z and millennial generations, accounting for 48% of consumers, not only shapes market dynamics but also influences channel distribution and the digitalisation of the purchase journey.

Adding to the complexity, the unique spending pattern across the region is noteworthy, with an anticipated annual expenditure of \$493 per household on personal care products in 2023. This amount is significantly lower than observed in Western Europe (half) and North America (one-fifth). This economic distinction presents a clear opportunity for crafting targeted, country-specific strategies. Recognising and capitalising on this diversity empowers the development of initiatives aligned with the specific needs and preferences of the Latin American consumer base. By doing so, tissue (and hygiene) products can effectively convey their added value, resonating with the intended target audience in this dynamic and evolving market landscape.

Retail tissue volume consumption softens amid inflation pressure, yet unmet potential remains

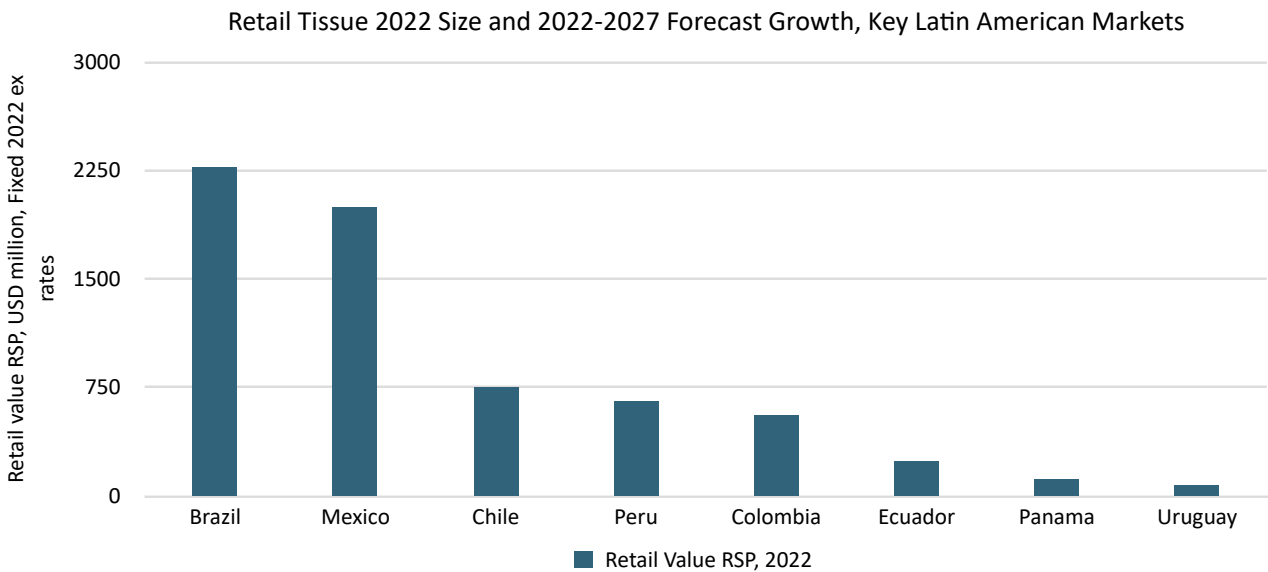
In 2022, despite the widespread resumption of daily routines and the adoption of hybrid work models, which contributed to the consistent expansion of the retail tissue sector in Latin America, the industry encountered notable

challenges. The emergence of high inflation, escalating unit prices, and strained supply chains proved to be substantial hurdles. As consumers grappled with elevated prices, they responded by shifting to more economical brands, opting for smaller package sizes, or implementing cutbacks to navigate these economic challenges.

In this context, retail tissue value sales have surged by 15% in 2022 (accounting for inflation effects), while volume growth has tapered to a modest 1.5% during the same period. Moving forward, the regional market is predicted to grow at 6.2% CAGR over 2022 to 2027. This growth will be primarily driven by the toilet paper category, constituting 79.6% of the market in 2022 and expected to maintain a robust 6.5% CAGR in value terms throughout the forecast period.

Looking at it from a different angle, the per capita sales volume of key tissue retail categories in Latin America notably trails behind that of regions with more developed markets. A striking illustration of this discrepancy is evident in the per capita consumption of toilet paper, where, in 2022, Latin America registered 4.1 kilograms compared to North America’s 8.4 kilograms.

What measures are required to boost per capita consumption in these categories? Should they be limited solely to brand positioning strategies and availability in distribution channels? This challenge presents a complexity that goes beyond simple solutions, involving essential governmental initiatives. These strategic actions encompass the



Source: Euromonitor International – Tissue & Hygiene 2023 Research Edition published in February 2023

enhancement of sanitary infrastructure in rural areas within key markets, addressing both infrastructure gaps and improving overall hygiene conditions, as noted in slide 1.

### AFH TISSUE SHAPED BY WORK PRACTICE NORMALISATION AND DISTINCT AFH DYNAMICS

Amidst the resurgence of out-of-home activities, the sales of these products are experiencing an upward trajectory, accompanied by distinct challenges arising from the evolving trends and characteristics of the primary target channels.

Although remote work has persisted as a consequence of the pandemic, this modality shows a year-on-year trend toward reduction. This is reflected in Consumer Lifestyles Survey, where 30% of respondents plan to maintain the work from home on a weekly basis in 2023, compared to 35% the previous year.

Although there are certain myths surrounding the hotel market and tourists' accommodation preferences in the region, the latest Euromonitor Travel & Tourism research figures indicate that only 7% of total lodging in Latin America are short-term rentals.

Meanwhile, 82% of Consumer Foodservice sales in the region come from independent establishments, presenting a significant challenge for the sales force of products intended for AfH activities.

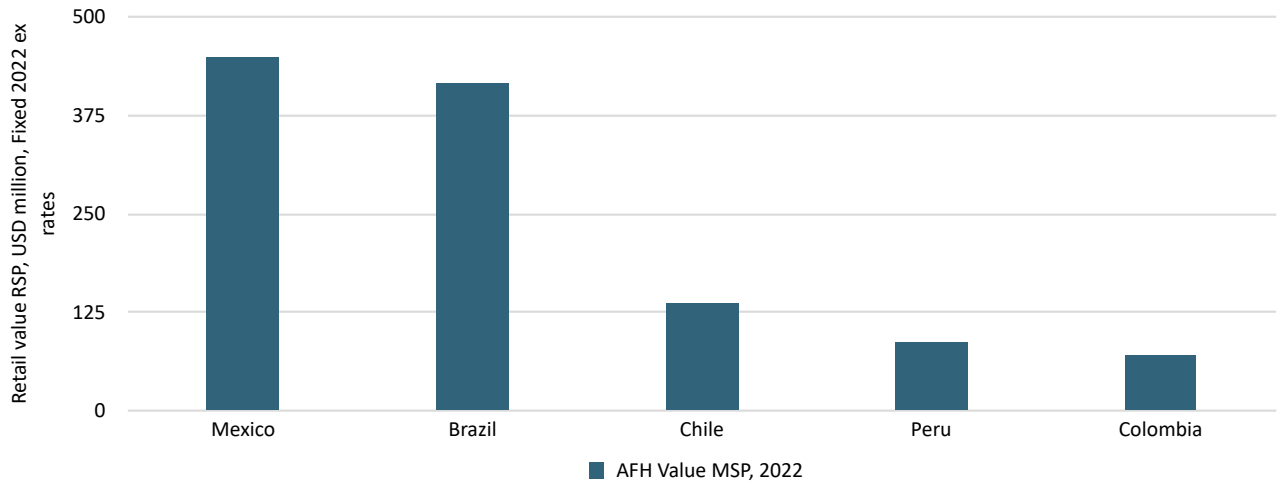
### AFFORDABLE SUSTAINABILITY REMAINS IS KEY TO INCENTIVISE GREEN PURCHASES

Is sustainability a pivotal factor influencing consumer choices in the realm of tissue products? The evidence suggests that it plays a crucial role, particularly in the context of packaging and its potential for recyclability. However, not at any cost.

According to the findings from Euromonitor's Voice of the Consumer survey, "Recyclable packaging" emerges as the foremost sustainability-related aspect influencing consumers' willingness to pay more for essential products in Latin America in 2023. It holds the seventh position, following attributes such as effectiveness, price-to-quality ratio, multifunctionality, and a strong/well-known brand. Yet the challenge lies in preventing recyclability from becoming an exclusive factor for a niche market willing to pay a premium.

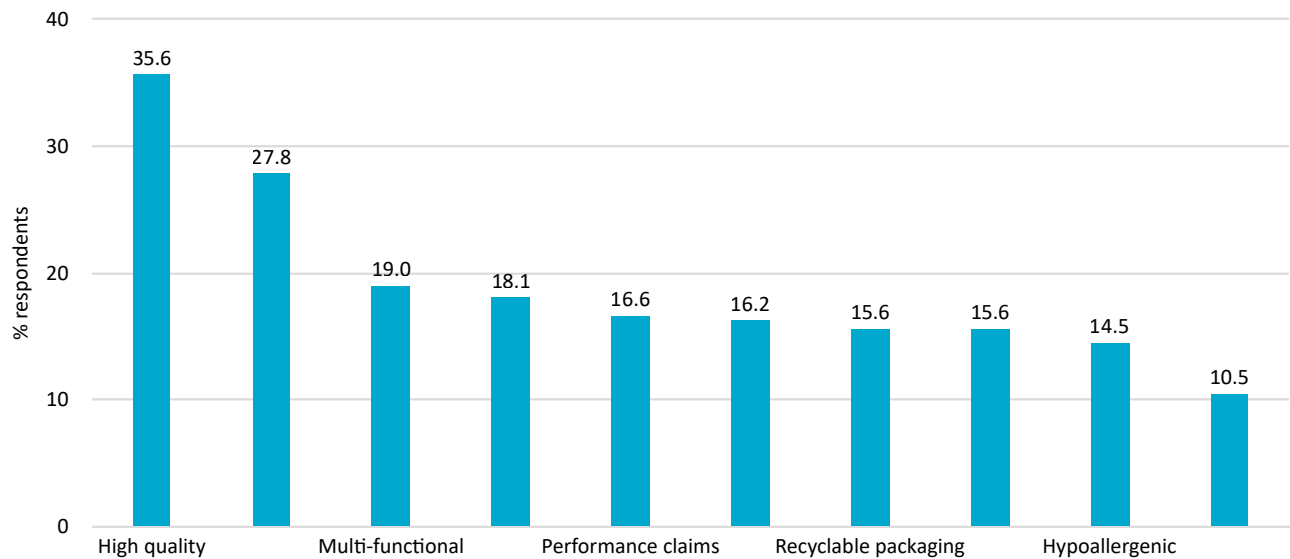
Considering this challenge and with a dedicated focus on making sustainability economically feasible, the concept of the circular economy takes on paramount importance. Striving for efficiency improvements across the design and production phases of tissue products not only benefits manufacturers but also resonates positively with end consumers. This strategic pursuit of circularity ensures tangible advantages that extend beyond the realm of production, aligning with the broader goal of making sustainability accessible without imposing a burden on consumers.

Away-from-Home Tissue 2022 Size and 2022-2027 Forecast Growth, Key Latin American Markets



Source: Euromonitor International – Tissue & Hygiene 2023 Research Edition published in February 2023

Willingness to pay more household essentials’ product features, Latin America, 2023



Source: Euromonitor International Voice of the Consumer: Lifestyle Survey, fielded in January and February 2023



# SUPPLY CHAIN INTEGRATION THE KEY AS DIVERSE LATIN AMERICAN MARKET ENTERS DEFINING ERA



Following the start-up of a TAD tissue machine at the company's Sahagún facility in Mexico in 2020, Essity continues to target premium products in its main global growth market. TWM Senior Editor Helen Morris speaks to Roberto Caballero, VP Supply Chain for LatAm, Essity.

**T**he next few years will be a defining period for the Latin American (LatAm) tissue market. Tissue projects in the region that have started up in 2023 or will be in development during 2024 and 2025 include three projects in Mexico, one in Argentina, one in Colombia, El Salvador, and Guatemala, and seven tissue projects in Brazil.

Whether the LatAm tissue market will enter a state of overcapacity in the next few years – or just extra capacity – remains to be seen.

For global tissue giant Essity, the region remains a “key growth area”, according to Roberto Caballero, Vice President Supply Chain for LatAm. From his base in Mexico City, Caballero, who has over 30 years of experience as a manufacturing, supply chain, and FMCG industry executive, discusses how Essity has positioned itself as “the fastest growing and value creating hygiene company” in the region. The company has confirmed its commitment to growth in the region, which it describes as an “emerging market”, and said that future development will take the shape of “innovation, more premium products, leading brands, digitalisation, with increased e-commerce sales and a Direct-to-Consumer business model.”

Its commitment has been underpinned in the past few years by two substantial investments. In 2019, Essity Mexico started-up a Toscotec-supplied TADVISION machine equipped with a Steel Yankee Dryer at its tissue mill in Ciudad Sahagún, Hidalgo. It was Essity Mexico's first AD machine, and designed for “extra-premium product quality”, according to Caballero.

In 2021, the company completed the acquisition of Productos Familia, finalising the acquisition of 45.8% of the shares in the Colombian hygiene company so that it now owns 95.8% of the business. At the time, Essity President and Chief Executive Magnus Groth said the move meant that Essity could “build an even stronger platform in Latin America to further increase growth, profitability, and efficiency, as well as accelerating the digital transformation.”

Now in 2024, Essity is the third largest player across Latin America with its Regio and Familia brands and market position, behind Brazil's Suzano and Chile's Softys.

With the substantial capacity push in the next few years, what will Essity's strategy be in one of the company's most dynamic growth regions? “In LatAm, we are organised in a way that the supply chain is the same that we have for Personal Care,” he says. “I am responsible for these sites across the region, and so out of the 10,000 people that



**Commitment to Latin America and profitable growth:** There are now tissue operations in 10 of Essity's LatAm plants, including the company's Cajicá, Colombia-based facility (pictured)

work for Essity in LatAm, 5,000 people work at the sites." He explains that several of the sites are "hybrid sites" that share tissue and Personal Care operations: "We see an advantage of this cross-fertilisation. Typically, the machines are run separately, but at the end they are manufacturing and they share the distribution channels, customers, etc. So when we approach customers with one face, of course we do it as an integrated supply chain that also brings synergies when we are sourcing materials, etc. So that is a lot of advantages."

There are now tissue operations in 10 of Essity's LatAm plants. "This is quite relevant, to show our commitment to the market here," he says. "A vital element is that we see profitable growth. Our LatAm strategy is reflected in the growth areas of Essity's global business. But when we say grow, we don't mean grow at any cost. It is profitable growth. And here, customer and consumer segmentation takes a very relevant line in terms of how we evaluate the strategy."

He says the business intends to grow, but not in all the channels, not with all the customers, and not with any certain volume. "We grow where we can find value for the company, and we can find value for the consumers and for our customers. In this regard, we see a very positive development for our plans for the years to come. We have invested in recent years in TAD capacity in Mexico with Toscotec.

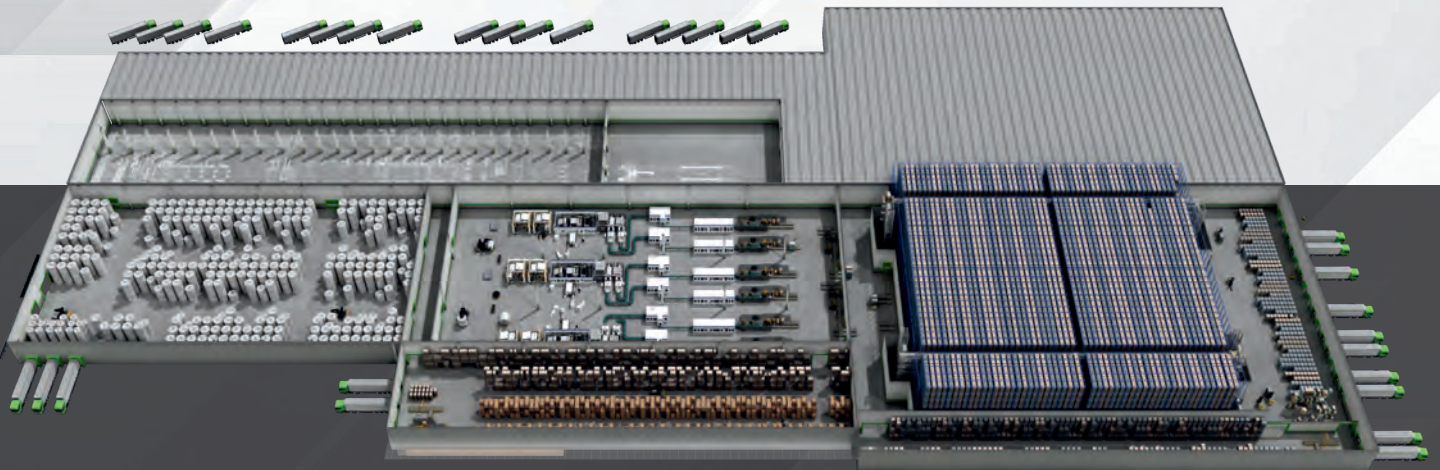
This investment is different from the typical TAD approach, a different route, and we have had very good results. Crucially it has allowed us to produce premium products in Mexico, and that is very important for the customers we want to target here. In some of the important portfolios, this

**"When we approach customers with one face, of course we do it as an integrated supply chain that also brings synergies when we are sourcing materials, etc."**



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opportunity allows us to have price gaps, because when the consumers go to the shelves, they choose value. So even in difficult times such as high inflation or even hyperinflation in some of the Latin American countries, people still look for value, and not just cost."

In early December Caballero and company executives conducted a "store check", visiting different sales channels and talking to consumers in the stores where their products are. "In one of these channels we saw consumers choosing our product and we were interacting with and asking why they were choosing the products they were. And the answer was because they find value. They say, yes, sometimes it may be more expensive, but I like the feel of the product, I like that it lasts a long time. Buying long-lasting products is very much in the mind of consumers here, it's very important for them because they want to save. They want to save in an intelligent way. And these types of consumers are the ones that are buying our products."

Recent innovations have also been targeted to give additional value to the consumer, for example the odour control technology that Essity has launched in Mexico in all consumer tissue products under the Regio brand and with future plans to roll-out in other LatAm and European markets. "People in Latin American countries are concerned with odour in their bathrooms, and this technology

allows us not just to put perfume in the product, which has been done for many years, but it also includes a technology that blocks the receptors in your nose. With that block, you can have a better environment in the bathroom. These types of innovations are very popular for people here."

During the pandemic, he adds the business had to be "very agile", and adapt to the quickly changing demands of consumers. As people became more and more concerned with hygiene, on market shelves Essity started to offer a paper towel product for use in the bathroom instead of using the normal clothing towel. "People liked this a lot because at that moment, they were very concerned about hygiene issues, and so they liked having this available, this extension of Professional Hygiene into consumer homes. It was a big success. So for us, it is very important that our supply chain is a competitive advantage for profitably growing the business. To achieve that, all our manufacturing operations need to be agile and trustable value creation machines."

This is what differentiates the business in the market: "This is in the mindset of all our employees, and I believe that's what makes a true difference. Most tissue technology at the end of the day is kind of "on the shelf". So what makes the difference is the way we as a company use it, and the intents you have in every person. Here it is 100% participation



**Store check:** Essity's Roberto Caballero, VP Supply Chain for LatAm, left, and Donato Giorgio, President, Global Supply Chain, visiting different sales channels and talking to consumers at a recent store check



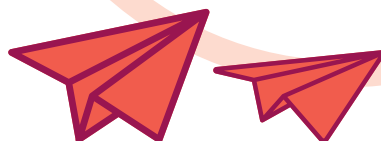
**Team effort:** Caballero highlights the knowledge Essity's employees have on the local and regional markets, and the importance that gives to the company's agility

of our people. And I am glad when people visit us, they don't talk too much about technology that we have at our sites, which is impressive in any case. But rather they talk about the culture that is in our sites. They talk about the seamless operation between the commercial teams and the manufacturing teams. The knowledge that the sites have on the markets, the important that they give to agility. For all the organisations, being efficient is the most important part. For us, being efficient is an enabler to being agile. That's the way we work and why we have a proven record of success in LatAm and the trust of the corporation to continue to grow in LatAm."

The expansion into Colombia with Productus Familia, previously a joint venture, was another key move. "It is now Essity-owned and we have also incorporated the branding, so we have the Familia branding – because it is a very powerful brand in those countries – as well as Essity's brands," Caballero says. "They have done a very strong marketing job over the years, and we wanted to keep that. But talking about the processes, all of them are Essity. It took us two years to have a full integration, and when we talk integration we talk harmonised processes, key operation processes, and also all the logos, etc. Everyone now feels it is Essity, so it's been a success case."

With the TAD line in Mexico boosting the company's premium product offering in the region, what are their plans for private label across LatAm? "Strategy is all about making choices, and we are very thoughtful when we make these collaborations," he says. "We have strategic collaboration with some private labels, where we

**"It is important that our supply chain is a competitive advantage for profitably growing the business. To achieve that, all our manufacturing operations need to be agile and trustable value creation machines."**







**Premium products boost:** Essity's Sahagún facility in Mexico started-up a TAD tissue machine in 2020

again see value for us but we are also able to bring value to them, as well as the consumers. We do have a collaboration also with private labels, which in our markets are growing faster than the organic growth of the markets, but nevertheless continue to be a little bit different than in Europe, for example. It is much less of the market here, and probably the concept of private label is trying to bring value to consumers, so we find some of their approaches very interesting, we are always eager to learn. Also, when we talk about strategic choices, in areas some of their distribution channels are very attractive for our brands. So it's not that we solely produce the private label product, but we also look at the collaboration to be able to have more consumers able to access our brands."

What is different and crucial for understanding the LatAm market, is each country's development and how they are sourcing their products. Despite the prevalence of large chain retailers such as America's Walmart, France's Carrefour, and Japan's 7-Eleven, the popularity of the independent Mom-and-Pop retailer stores in emerging markets – Essity groups LatAm in this category – remains strong.

From kiosks to corner stores, Mom-and-Pops – a colloquial term used to describe a small, family-owned business – sell a variety of products from the ingredients for Mexico's Classic Paloma cocktail, to Brazil's cafezinho (small coffee), Pão de queijo (cheesy bread) and Coxinha (chicken croquettes), to toothbrushes, loo roll and kitchen towel.

In Mexico, for example, Caballero says Mom-and-Pop stores can get the products they sell from either the big super stores or from the traditional distributors. "These types of stores are also constantly and substantially evolving. As a result, it's a very fascinating time for supply chains, because these channels are in continuous evolution.

Sometimes it is a challenge because you must keep up with them to serve them well. But that is also important because then we find synergies and efficiencies that are a win-win for everyone."

Export is also an increasing revenue stream. Essity currently exports some SKUs that it chooses to have in production in some sites, for PeakServe Hand Towells for the AfH market in its Professional Hygiene category. "We do also produce it in the US, and we distribute it in Latin America. Generally, what we do is the SKUs that have a low volume, we would rather move them and create the pool of demand in the market. And once we have a convenient demand for it, then we put the capacity. And we also do the other way around, so we sell some products so that we are continuously evaluating opportunities for growth supply within Latin America, and also to other regions like Europe or the US. But compared to other industries, tissue is very difficult to move, it's not very efficient so we try to be very selective with it. Probably in other categories such as Personal Care it's more efficient to do the cross-supply. One advantage, however, is that we can take advantage of our footprint. We try and source products in a more convenient way, from Central America, for example, for Puerto Rico or for Dominican Republic. For the countries we don't have the manufacturing units located, such as Peru, we just try to optimise the supply chain."

The largest raw material the company sources is eucalyptus from Brazil. What the company is currently seeing there "very interesting," he says. "In tissue, it has been several years since we have replaced long fibre. But over the years, for some SKUs we have been able to replace using just long fibre, and now we produce it only with short fibre. They are great products that have a better cost for us, and it's also then cheaper when you sell it



because we can apply this cost. Recently, what has also been a good opportunity using eucalyptus for products in our personal care products. So we also have a strong initiative there, which is also being led by Latin America."

LatAm is now the main growth area globally for Essity, claiming 16% of the group. Caballero adds that North America and Asia are also relevant in terms of growth if you combine all the categories. "But along with Asia, Latin America with the population it has is one of the main regions globally that is fastest growing. It's an incredibly fast-growing market."

And with all the new capacity coming on stream, he says that it will be hard to know how that will change the market. "We can be speculative of how those elements will change the market. Typically, I think there is a certain balance in the system. The challenge for the new capacity coming in is the capability of the different corporations to bring the needed value for consumers and customers. People are more concerned with these megatrends like sustainability, for example. So I think that over time, they would rather buy products that have a firm sustainable commitment than just products per se. If you are not able to bring this value for consumers – and have a business model to get profits from it – it can be very dangerous for some companies that are bringing this extra capacity into the market. So it really depends on how you position yourself within the market. In the end, the new tissue capacity

is exciting, and we are looking forward to seeing the developments."

One of the main commitments for Essity, he concludes, will continue to be sustainability, and also the trend of how to make use – and be smart – with digitalisation, which is "very evident in the market."

"We are very committed to sustainability. It is one of our key elements. We are spending substantial resources, capital, and time, to make sure that we are on track with our commitments for CO2 reduction for 2030 and 2050. With digitalisation, it is an interesting point as it is an enabler. Not for our brands, but because digitalisation enables us to directly reach consumers and to create attractive opportunities for distribution. Our brand Regio, here in Mexico, is continually using more digitalisation, but it's not just about what you can see as a consumer, nor what you see as a customer. It's also the way we manage information about how we understand consumers and how we optimise our supply chain inside of our walls."

This will also be another important development in the years to come: how digitalisation is helping companies to optimise: "Not just the paper machine, which has been very sophisticated over the years, but the whole supply chain. The way we prepare the stock, the way we use our chemicals. And I think that's a very relevant development. Our brands Tork, Regio, Familia, will all continue to take full advantage of that."



**Employees at Essity's Cajicá plant in Colombia:** LatAm is now the main growth area globally for Essity, claiming 16% of the group

# THE LATIN AMERICAN PULP GIANT EMERGING AS A MAJOR FORCE IN TISSUE

Just seven years after moving into the tissue manufacturing market, Suzano's Head of Global Pulp Sales, Marketing and Logistics Leonardo Grimaldi says the company is embarked on era-defining expansion. TWM Senior Editor Helen Morris spoke to him in São Paulo, Brazil.



**M**erger and acquisitions, dramatic capacity expansions, fluctuating pulp prices ... it's an exciting time for the Latin American tissue market, which shows no signs of slowing down. Tissue projects that have started up in 2023 or will be in development during 2024 and 2025 include a tissue plant project in Argentina, one in Colombia, El Salvador, and Guatemala, three projects in Mexico, and – up until the end of 2025 – seven tissue projects in Brazil.

In the first quarter of 2026, following its R\$650m investment in a new tissue paper mill in Espírito Santo, Brazil, vertically-integrated eucalyptus pulp and paper giant Suzano will put a further 60,000tpy of tissue capacity into the market.

Whether the Latin American tissue market will enter a state of overcapacity in the next few years – or just 'extra capacity' – remains to be seen. São Paulo-based Leonardo Grimaldi, who joined Suzano in 2000 and became the head of Global Pulp Sales, Marketing and Logistics in 2021, believes it will be an era-defining time – and a crucial period of capacity growth for the Brazilian tissue market.

As a world-leading producer of eucalyptus pulp, Suzano most recently made headlines when it acquired Kimberly-Clark's Brazilian tissue business assets for \$175m in 2022, after diversifying its product offering into tissue manufacturing in 2017. This boosted its Consumer Goods tissue manufacturing division to 280,000tpy, which at the

time increased Suzano's presence in the country's tissue market from around 13% to 22-23%.

And following the start-up of TM10 in Espírito Santo, the company's total tissue capacity will be 340,000tpy.

Speaking over a Teams call, in fluent English, Grimaldi – responsible for Suzano's pulp business unit, selling to tissue producers globally – explains that the company's consumer goods business unit has recently become the leader in value market share in Brazil. It is now ahead of Chilean-headquartered CMPC's Softys Brasil's 307,000tpy.

"Kimberly-Clark's brands are the leading brands in Brazil, and there is such a premium to them that it takes us to a very important and relevant position in terms of value," he says. "As a result, our current market share in Brazil is 23.7%. That is only in At-Home consumption, it doesn't cover the AfH business, which in Brazil is small, say 15% of the market. The Brazilian market is roughly one million tonnes of toilet tissue, and napkins and kitchen towels, and roughly 200,000 tons of AfH."

The increased tissue capacity in Espírito Santo will also mean Suzano can enhance its competitiveness in the most significant consumption region. The start-up of the tissue machine is expected for the first quarter of 2026. Investments are also being made at Suzano's pulp mills – a further R\$520m will be spent to replace a biomass boiler, and R\$490m has been invested to expand the company's full pulp production capabilities in São Paulo. "As a



# SUZANO

**Product portfolio:** Coated and uncoated printing and writing paper, paperboard, market pulp, flu f pulp, lignin, and, as of 2017, tissue paper.

**Physical presence:** Two integrated pulp and paper mills in the state of São Paulo (Suzano Unit and Limeira Unit), one in the state of Bahia (Mucuri Unit), one non-integrated paper mill in the state of São Paulo (Rio Verde Unit), as well as four pulp mills in the states of Maranhão (Imperatriz Unit), Espírito Santo (Aracruz Unit), Mato Grosso do Sul (Três Lagoas Unit) and São Paulo (Jacareí Unit). Also the shareholder of British-headquartered biotechnology company FuturaGene, has one of the largest paper and printing products distribution capabilities in South America, a representative office in China, and subsidiaries in the United States, Switzerland, Argentina, and Austria.

**Consumer Goods division:** When the company diversified its product offering in 2017 and moved into tissue manufacturing with its third business unit – Consumer Goods – it started with tissue manufacturing at sites in Mucuri, Bahia, and in Imperatriz, Maranhão. The company has a new mill in Cachoeiro de Itapemirim in the state of Espírito Santo.

**Mergers and acquisitions:** The merger of Suzano Papel e Celulose with Brazilian eucalyptus pulp producer Fibria was concluded in 2019. Following with the acquisition of tissue producer Fábrica de Papel da Amazônia (Facepa) in 2018. It then launched its first brand of toilet paper, Max Pure. Acquired Kimberly-Clark's Brazilian tissue business assets for \$175m in 2022.

**Ongoing projects:** In 2021, the Cerrado Project was announced, which involves the construction of a new pulp production plant in Ribas do Rio Pardo, in the state of Mato Grosso do Sul, producing 2,550,000tpy of eucalyptus pulp. Scheduled to become operational by June of 2024, it will also be the first fossil-free pulp plant in the world.

Another project announced by the company is the construction of a second tissue factory in the state of Espírito Santo. The plant, which will boost the company's production capacity by 60,000tpy to 340,000tpy by 2026. Suzano will also expand its flu f production capacity to 440,000tpy from 100,000tpy.



**A world-leading eucalyptus pulp producer:** Suzano expanded its tissue manufacturing capacity after acquiring Kimberly-Clark's Brazilian tissue business assets in 2023





**Cerrado Project:** Suzano's new R\$22.2bn pulp production plant will produce 2,550,000tpy of eucalyptus pulp, and is scheduled to become operational by June 2024

company, we are structured to ask how we can be more and more competitive, so that we are resilient to the ups and downs of the pricing cycle of the commodity. By design, we offer the best solution in terms of product and service and value to our customers who are non-integrated paper producers located globally."

In 2021, Suzano also announced the Cerrado Project, the construction of a new pulp production plant in Ribas do Rio Pardo that will produce 2,550,000tpy of eucalyptus pulp. Scheduled to become operational by June of 2024, it will also be the first fossil-free pulp plant in the world.

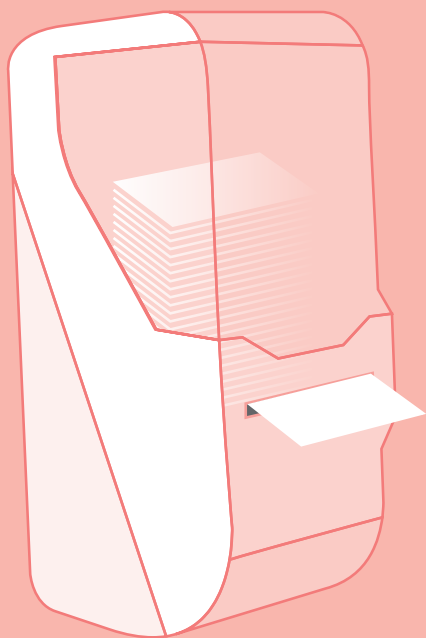
"I run Suzano's pulp business unit and we supply everyone, including our own consumer business unit, on the same terms. There is a huge virtual wall – on one side we are expanding tissue, through a separate and independent business unit, but it is my responsibility – as a leader of our market pulp division – to support all the tissue producers in Brazil, and help them stay competitive. It's very interesting to understand that being vertically-integrated does not undermine the possibility of being able to buy and sell market pulp across the board. Purchasing decisions depend a lot on logistics and this influences competitiveness, so having pulp mills in Brazil located close to our customers makes a huge difference."

With Suzano's extra 60,000tpy of tissue capacity also coming on stream and being sold domestically within Brazil, what will the company's market strategy look like soon from the point of view of a pulp producer? "The strategy is based on value creation, but this is set independently by our consumer goods division. Across the region, there will be new tissue machines starting up in 2025 and my job is to sell them the pulp, at competitive prices and the right quality. Our new \$2.8bn eucalyptus Cerrado Project is expected

**"Where we see growth is in Latin America, although obviously from a smaller base. But mainly from China and other Asian markets."**



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to start production in the first half of 2024, and it will be the largest single line pulp mill in the world with several features in terms of sustainability and competitiveness as well. Obviously one of the main segments that we sell our pulp to is tissue producers, so a big part of this new pulp plant will be directed to tissue producers globally."

"It is also important to understand how we look at the results of our business units. Obviously, we do not transfer the benefits of being vertically integrated to our consumer goods business unit because they have to create value and generate results as if they were any other tissue producer. Suzano's tissue business is managed as if it were an independent tissue producer, buying pulp from the market at prices which are the same as other competitors."

Looking at dynamics for tissue demand, he adds that in Europe and the United States, the company is seeing a more mature and stable market, in contrast to the Asian markets: "We see a small growth, or even a steady state in these markets. Where we see growth is in Latin America, although obviously from a smaller base. But most of the growth is in China and other Asian markets."

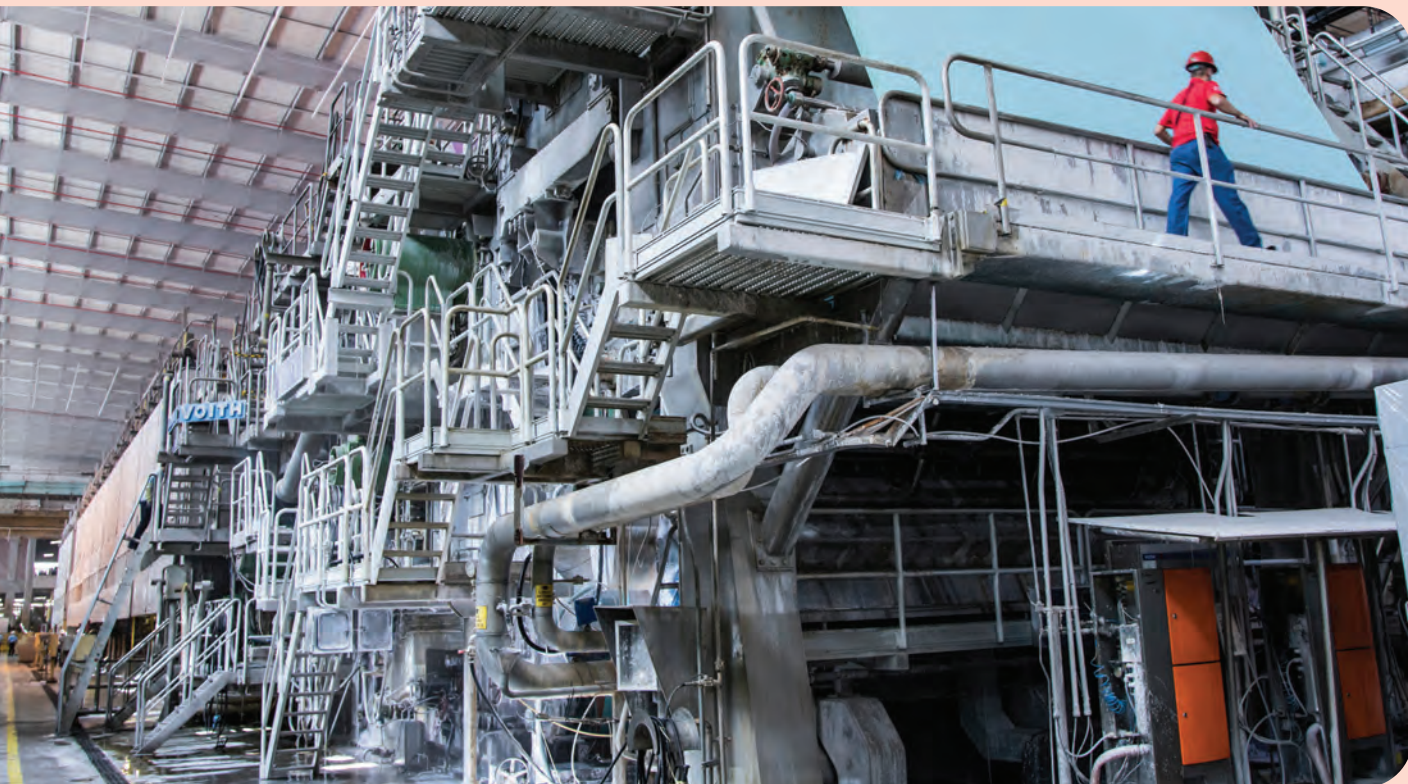
In terms of growth pulp consumption, 90%+ will come from demand in Asian markets, particularly in the tissue segment.

As to the volatility of pulp price hikes over the past few years, he expects the pulp market to

continue to fluctuate. "The pulp market is still very cyclical. It has always been volatile, but when you compared it to other commodities, it was one of the less volatile commodities. But since 2021, we have been seeing more pulp being traded in financial future markets, especially in Asia, and this has been impacted by an increasing number of unexpected downtimes in pulp mills globally. All these new variables are making the pulp price even more volatile than before."

Understanding the cyclical and fundamentals of the commodity, he adds, all depends on how much demand and supply there is. "Our view is that there is a positive and solid demand for fibre, and that demand for hardwood is growing at a base of 1.2m to 1.4m tons per year."

"In 2023, we had two big projects starting, one in Uruguay, one in Chile, which on an annual basis added three million tons. Then we have our Cerrado project by next year with 2.55m tons. When you add up these numbers they will exceed the demand, and that's why prices have come from an all-time-high in September/October 2022, to a low in April 2023, because that's how the market and the customers are reacting to this oversupply that is happening at this moment, when big projects start and means the markets are unbalanced. My view is that it will be even more volatile based on these upcoming capacities, but also based on the fact of more and more unplanned downtimes affecting the



**Tissue manufacturing:** Suzano's current tissue market share in Brazil is 23.7%





**Investment for 2026:** Suzano will put an extra 60,000tpy of tissue capacity into the LatAm market

supply side of the equation, and they are more and more present."

There are two main issues to address here, he adds. First, in the northern hemisphere there is substantial pulp production, but he says the assets "are quite old, several mills are 40, 50 or 60 years old", which leads to more runnability issues and more unplanned downtime stops. "The second issue is that it is incredible to see how climate change is playing a role in our sector. We are seeing floods, droughts, fires, extreme cold weather. A lot of these factors are affecting production, with greater intensity than they did before. So, we have had several surprises in the cycles which take volumes out of the supply side of the equation. This means that it is then very hard to plan. In terms of guessing the prices for 2024, 2025, it's very difficult, the experts all have different models and insights. It's not just about the upcoming supply, and forecast, now you must forecast for something unexpected or un-forecastable. How can you forecast for extreme weather that will happen in 2024, or for a war? These unplanned factors are playing more and more of a role in our markets."

As reference, Grimaldi says that historically a reduction of 700,000 tonnes in the supply of pulp was usually accounted for. Yet as of 2022 and 2023, these numbers are reaching almost three million tonnes. "This is the impact these downtimes are having on the market. If there is an additional project, and suddenly, a mill shuts down, markets have to rebalance themselves quickly. This year

we have had three million tonnes of softwood and hardwood being shut down unexpectedly. We, as well as our customers, need to prepare ourselves to act quickly."

As to Suzano's strategy for the consumer goods division over the next few years, the company is focused on integration and securing the synergies coming from the recently acquired Kimberly-Clark operation and brands, and the new tissue line being built in Brazil.

What about the growth in capacity in Brazil's tissue market? Brazilian tissue manufacturer Bracell SP Celulose, part of Singapore-headquartered Royal Golden Eagle group, announced in 2022 that it had invested in four Andritz-supplied PrimeLine™ W 2000 tissue machines to be installed at its mill in Lençóis Paulista, São Paulo, with start-up planned for 2024.

Can Suzano rule out investing in another tissue machine after the Espírito Santo project? "There is a huge overcapacity in Brazil, so I would not rule out that future growth among the leaders of the market can come through not organic, but inorganic movements. More mergers and acquisitions as we have done recently with Kimberly-Clark. Again, there is a lot of capacity in the market still so we can't take out the possibility of new machines, especially as we talk to our customers who see possibility in this arena. Also, what is strongly discussed is how we can grow by generating value whilst also taking on opportunities."

He emphasises the importance for the company to continue to have clarity in its business structure. Suzano has “very much divided” business units, he says, in reference to the pulp unit, the paper and packaging unit and the consumer goods unit. “It is as if there are three different and separate companies inside a holding company. We are very serious in it how we separate them, how we separate their results, and also all communications related to the customers of each one of them.”

For example, he describes how the R&D centre for the pulp business unit is based in Espírito Santo state, and the R&D for Suzano’s paper, packaging and tissue business is based in São Paulo state. “They are completely different teams, there is a huge separation. Being the global leader for pulp production, we do not, will not, and cannot jeopardise our relationships with our pulp customers, who represent 85% or so of our business and who are the biggest independent tissue producers globally. We are very protective of them. Some 85% of what we do is selling pulp, pursuing high-quality and low cost all the time, and maintaining an incredible service level to our customers. That’s why we own four port terminals in Brazil and have 50 vessels that are operating to deliver our pulp to our customers, 12 of which are exclusive to Suzano. We have more than 150 employees in Europe, the US, China, with the objective of supporting our customers and their desired service levels. That’s our upmost goal. It’s a whole system dedicated to how we can increasingly service our non-integrated customers globally, and their leading tissue brands globally.”

In the tissue segment, he adds that eucalyptus pulp “has been kind of disruptive” in the past few years: “Suzano invented using pulp from eucalyptus in the late sixties, and ever since eucalyptus has become more and more usual in the tissue market, because fibre coming from the eucalyptus trees has specific characteristics that improves the product itself. Hardwood pulp has been growing in the tissue arena, and the 2022 figures is that hardwood now represents 50% of the supply of fibres to tissue producers globally.”

Yet, he says there is still a lot of space to grow, and in several markets tissue products are already being produced with 90% to 100% hardwood eucalyptus pulp.

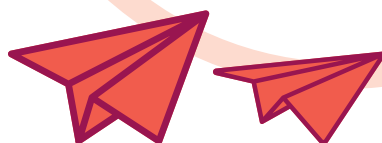
Across Latin America, he sees growth potential for tissue, but also a movement happening in the AfH markets. The AfH market uses a lot of recycled fibres, similar to the US market. Usually, the AfH tissue producers would source most of their recycled fibers from Sorted Office Papers, the “SOP grades”, which are the top quality of the of the pyramid in terms of recycled papers. Especially after Covid, and home office and more and

more digital interactions, there is a big dip in terms of demand for printing and writing papers.”

This has created a big impact for AfH tissue producers because these sorted office papers recycled grades, are increasingly less available, as a side effect in the decline in the printing and writing markets. He adds: “We are seeing a big trend for these types of producers coming to us to look at alternatives in virgin fibres to substitute what was previously done with recycled office grades. And this is very impactful because it increases our accessible market, but also it brings the consumers a completely different quality of product. When there is the move in trend, consumers are seeing the quality benefit of that as well. And talking about prices – the cost of this recycled grade is increasing as well. As our customers are making their decisions, despite the improved quality of the product, they are making their decision based on the economic equation while comparing recycled grades to virgin fibres. And this then makes sense for them to switch to a virgin fibre. This is also a trend we are seeing in AfH tissue.”

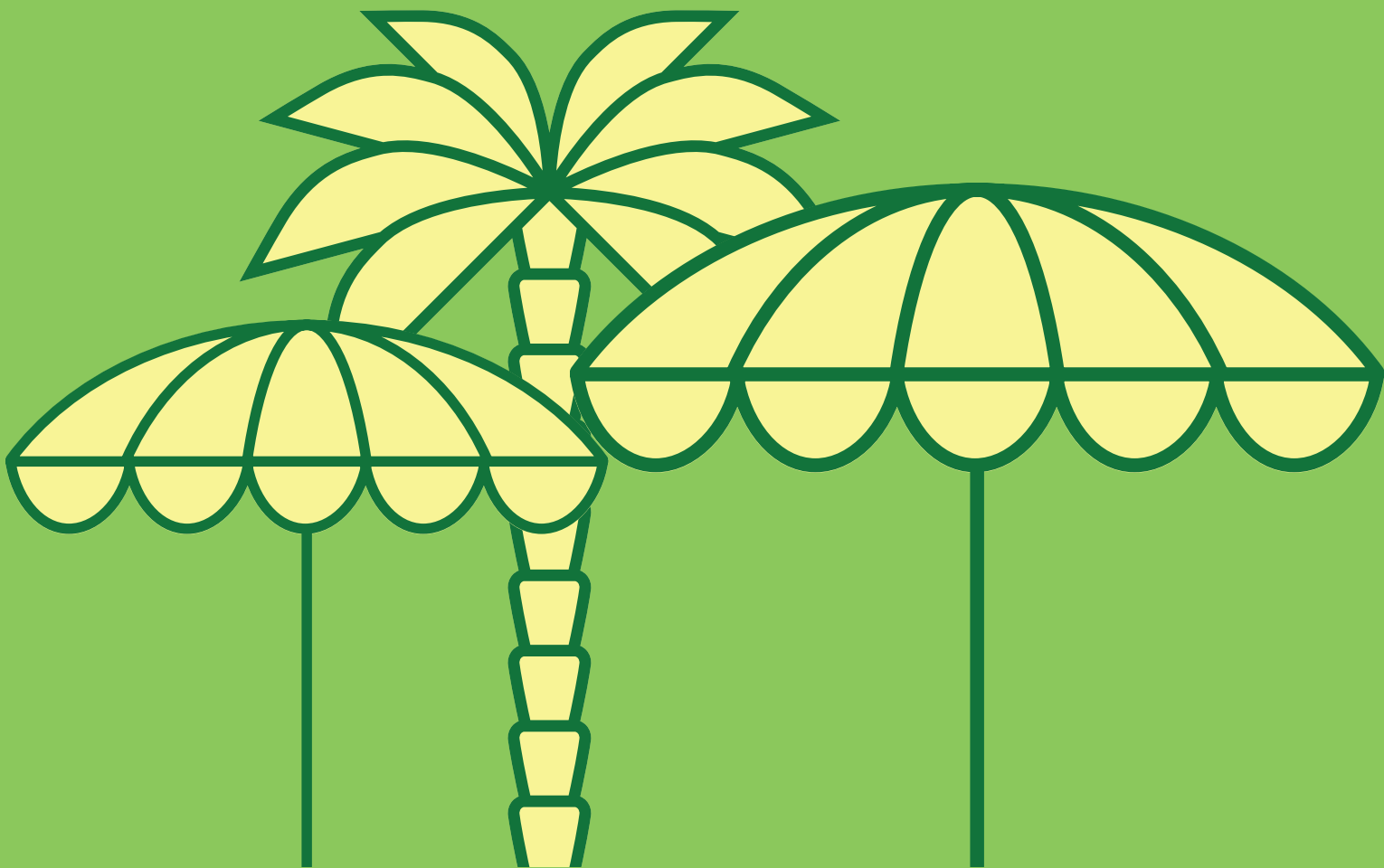
As for an increase in the popularity of private label products across the Latin American region, Grimaldi says he observes changes in the market: “Our customers are paying attention to this movement and trying to react to that. But still in the Americas, I would say that branded products represent most of the market, while in Europe private labels represent most of the market. So, it’s a different set up in terms of how our customers, tissue producers, define their go-to-market and branding strategies. And they continue evolving, and we will keep watchful on all possibilities that can be created for us.”

**“Especially after Covid, and home office and more and more digital interactions, there is a big dip in terms of demand for printing and writing papers.”**



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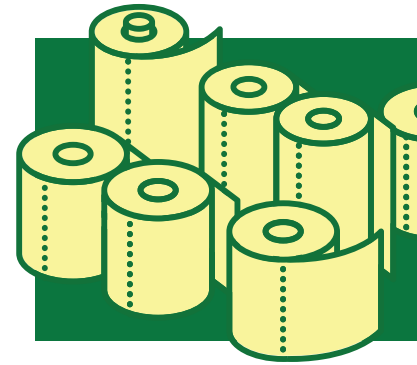
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# WELCOME

## Welcome to the Sunshine State for Tissue World Miami 2024!



**We are delighted to welcome you to the event at the forefront of the industry; where leaders, manufacturers, distributors, and buyers convene for three days of connections and insights.**

Following a successful Miami event in 2022, we continue to build on the momentum with 30% growth this year.

Our keynote sessions promise to be highlights of the event. Tissue Technology Visionary, Fabio Perini, will share his vision for the tissue factory of the future. Additionally, Jean-David Tardif, President & COO of Cascades, will share expertise on navigating challenges and fostering sustainable growth.

The rest of the conference agenda is packed with engaging sessions on topics like supply-side volatility management, initiatives for long-term business sustainability, and meeting customer expectations. A new addition is the Tissue Workshop on Friday February 2, where participants will collaboratively design a sustainable blueprint for the future of the tissue industry.

We also have a fantastic trade show with over 125 exhibitors from around the globe. The exhibition offers the chance to see the latest products on display and promises valuable networking opportunities with the tissue supply chain.

And let's not forget the happy hours on Wednesday and Thursday, providing the perfect setting to mingle with new and familiar faces in a relaxed setting.

**See you on the show floor!**

**Tom Hill**

*Event Director*



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## Sustainability sessions

There is a unifying issue faced by all in the Tissue industry: how to consider and embody sustainability, specifically energy efficiency and decarbonization, throughout manufacturing processes.

A common thread throughout the conference, these sessions will especially focus on the future of the tissue industry.

<b>Day 1 08:30 – 09:00 SMS Theatre</b>
Keynote Address: Crafting a Sustainable Future
<b>Day 1 15:00 – 15:20 Technical Sessions</b>
Discover the Path to Energy Efficiency and Enhanced Production
<b>Day 1 15:20 – 15:40 Technical Sessions</b>
Alternative approach to TAD production in the “Climate Change” era
<b>Day 2 08:55 – 09:20 SMS Theatre</b>
Decarbonizing Tissue – Progress and potential for the North American tissue industry
<b>Day 2 09:20 – 09:55 SMS Theatre</b>
Envisioning Carbon-Free Tissue Production
<b>Day 2 11:00 – 11:25 SMS Theatre</b>
Outlook for Global Consumer Tissue and Opportunities amid New Consumer Reality
<b>Day 3 09:30 – 10:00 Tissue Workshop</b>
Tissue Workshop Presentation: Quantifying the Impact of Global Megatrends: A Deep Dive into Digitalization, Social Changes, Sustainability, and Their Effects on Fiber Technologies



# TECH TALKS

## IN THE TECH TALKS THEATRE

These sessions are bite-size and free to attend for everyone on the exhibition floor. Tech Talks will examine the latest innovations and best practices, including new creping developments, acid-free laser technology, roller covering efficiencies, integrated packaging and palletizing solutions, and more.

### Day 1 - Wednesday 31 January

**13:00 - 13:15**

**The most critical maintenance practice that directly impacts Tissue Line quality, production, and profits**

Harold E. Harwood, Northeast Sales Manager, The Kinetic Company

**13:15 - 13:30**

**Converting Design Considerations for Optimization, Flexibility and Productivity**

Richard Druyeh, Sr. Project Manager, Wood

**13:30 - 13:45**

**New Creping Developments**

Gary Furman, Sr. Corporate Scientist, Nalco Ecolab

**14:00 - 14:15**

**Advance Acid Free Laser technology**

Christian Viviers, CEO, Managing Partner, Gravion

**14:30 - 14:45**

**Post-2020 Maintenance Strategies**

Bruno Baggio, Technical Program Manager, Radix

**14:45 - 15:00**

**Unique NCR Crepe Technology**

Giampiero La Pietra, Tissue Division Manager for NCR Biochemical

### Day 2 - Thursday 1 February

**13:00 - 13:15**

**Viscosity impact on paper strength**

Luis Antonio Marques Junior, Customer Technical Support Engineer, Bracell

**13:15 - 13:30**

**Idle refiners - make better tissue**

Mark Christopher, Global strategic Market Manager – Tissue, Buckman International

**13:30 - 13:45**

**Best Practice and Future Innovations in Roller Covering and Management in a VUCA World**

Guillaume "Billy" Bordaïs, Global Tissue Converting Expert, Hannecard Group

**14:00 - 14:15**

**Tissue Business Digital Backbone for Paper Making and Converting All in One**

Jarmo Ropponen, Head of Tissue, Head of Asia-Pacific, CEO Malaysia, Tietoevry Pulp, Paper and Fibre industries

**14:15 - 14:30**

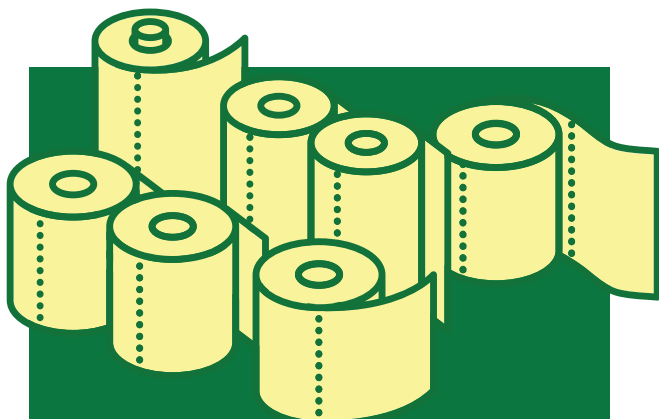
**Boost Efficiency with Machinevision**

Michael Schlafman, Account Executive, Pulp & Paper, ISRA VISION

**14:30 - 14:45**

**Efficiency at its finest: the benefits of integrated packaging and palletizing solutions for your business experience**

Brian J. Gingras, North American Director of Sales for Valley Tissue Packaging and TMC North America, IMA VTP / IMA TMC



## EXHIBITOR LIST &amp; FLOORPLAN

9. Septembar - Tissue Converting.....	E40	MAN Energy Solutions.....	C30
A.Celli Paper.....	F70	Matthews Europe GmbH.....	A44
Adhesives Research Inc.....	G64	Maxima Tissue.....	D74
Air Systems Design Inc.....	E50	Maya Plastik Ambalaj Sanayi ve Ticaret As. ....	B75
Aktul Kagit Uretim Pazarlama A.S.....	D70	Megall Paper (Qingdao) Co., Ltd.....	C65
Alvarez Ultra Tissue Machinery Engineeri.....	E24	Microline Srl.....	E31
Alwin Manufacturing Co. Inc. ....	E51	Miyoshi Oil & Fat Co. / CellMark.....	A60
Andritz Inc.....	B20	Mpac Langen.....	C76
Apex International.....	F75	N.C.R. Biochemical S.p.A. ....	C74
Baker Titan.....	B91	Nalco Water.....	G20
Baldwin Technology Co.....	E10	Narsingh Dass & Co Pvt Ltd.....	E60
Baosuo Paper Machinery Manufacture Co., Ltd.....	D40	Northern Engraving and Machine (NEMCO).....	E10
Bashundhara Paper Mills Ltd.....	G24	NuMove Robotics & Vision.....	G74
Buckman International.....	B40	Ocean Associate Co., Ltd.....	A30
C. G. Bretting Manufacturing Co., Inc.....	F10	OK Science and Technology Co Ltd.....	A40
Cellwood Machinery AB.....	G10	OMC Collareda Srl.....	E53
Charta Global Inc.....	G70	Omet Srl.....	C40
Clouth Sprenger GmbH.....	E44	PaperFIRST – ENP Publishing Group.....	D75
Convermat Corporation.....	D50	Paper & Tissue One Show Abu Dhabi.....	B74
CR Meyer.....	A22	Paper Converting Machine Company - PCMC.....	E10
Dean Machinery International, Inc.....	C24	Papertech Inc.....	D42
DuBois Chemicals.....	G72	Papeterie Le Bourray.....	C71
E80 Group Inc.....	C10	Paradigm Chemical.....	C74
Eczacibasi Consumer Products Co.....	A42	Partex Tissue Limited.....	F76
Edson Packaging Machinery Ltd.....	D10	Perez Trading.....	F20
EDT - Enzymatic Deinking Technologies.....	F30	Pinnacle Fibres Inc.....	E63
Emirson Global Kimya Sanayi Anonim Sirketi.....	C75	Precision Roll Solutions - GB Embossing Inc.....	E41
Emtec Electronic GMBH.....	E73	Proflow Inc.....	G22
Enerquin Air Inc.....	G14	Promotech Srl.....	F44
Engineered Recycling Systems, LLC.....	D76	Pulsar Engineering Srl.....	C21
EPIQ Machinery.....	F91	Ronco Machine, Inc.....	G40
Essel Seluloz Ve Kagit Sanayi A.S.....	F62	S.T. Macchine Spa.....	G30
Europap Tezol Kagit Sanayi ve Ticaret A.S.....	C60	Saigon Paper Corporation.....	E82
Fan Separator GmbH.....	G80	SDF Schnitt-Druck Falz-Spezialmaschinen GmbH.....	D63
FIS Impianti SRL.....	F74	Sellers Nonwovens.....	G84
FNA Inc.....	E30	Senning GmbH.....	G82
Foshan Nanhai Dechangyu Paper Machinery Manufacture Co., Ltd.....	B44	Servipap LLC.....	F34
Futura SpA.....	D30	SGS-IPS Testing.....	C91
Gambini S.p.A.....	B50	SharpCell Oy.....	E70
Giotto Technologies Srl.....	D40	Sofidel America.....	F81
Global Link & Supplies Inc.....	F40	Solenis LLC.....	F60
Gravion USA.....	B81	Spacevac Incorporated.....	B72
Gravity Padma Paper Industry LLP.....	E62	SPS Corporate.....	G50
Guangdong Imako Intelligent Equipment Co.,Ltd.....	D80	Star Paper Mill Paper Industry LLC.....	E64
Guangdong Zhidesheng Technology Co. Ltd.....	G60	Stax Technologies.....	E10
Hannecard Roller Coatings, Inc.....	G32	Streco Fibres Inc.....	F80
Hayat Kimya Sanayi A.S.....	E20	Suzano Pulp and Paper America, INC.....	E80
Hell Gravure Systems GmbH & Co. KG.....	C63	TAPPI Tissue360 Magazine.....	C90
Henrich (shandong) Health Technology Co.....	B77	TDL Hygiene Co., Ltd.....	E81
Hergen S/A Paper Machinery.....	C33	The Kinetic Co.....	B85
Hinnli Co., Ltd.....	D80	Tietoevry Finland Oy.....	G44
IBC Paper Training.....	C70	Tissue Tec Sales & Service GmbH.....	F34
Ibercutting S.L.....	F44	TKM United States.....	G62
ICM Makina Mühendislik Ltd.....	C50	Tongxiang Jianfan Technology Co.,Ltd.....	D90
IMA - TMC SPA.....	B10	Toscana Spazzole Industriali Srl.....	E84
Indevco Paper Making.....	D60	Trebor, Inc.....	B60
Infinity Machine & Engineering Corp.....	B30	UNIMATEC Praegesysteme GmbH.....	D62
International Knife And Saw, Inc.....	G34	United Converting Tissue Srl.....	A10
Jacob White (Packaging) Ltd.....	E72	Universal Tissue Machine Co. Ltd.....	F77
Julia Utensili Srl.....	G42	Valmet.....	F50
Kemira.....	F84	Valmet Tissue Converting S.p.A.....	D20
Liuzhou Fexik.....	A32	Weifang Lancel Hygiene Products Co.,Ltd.....	C72
Luwa America Inc.....	A20	Weko North America, Inc.....	B70
Mac Due S.R.L.....	D64	Winkler+Dünnebier GmbH.....	E10
Maflex Srl.....	C42	Zhejiang Jiecheng New Material Co., Ltd.....	A50
Magazines Group RNP.....	B90		

Exhibitor List and Floorplan correct at time of going to print





# CONFERENCE AGENDA

**Conference Theme:**

All to play for a VUCA world  
Strategies for winning with tissue

**WEDNESDAY, JANUARY 31, 2024****Senior Management Symposium****SESSION 1 - CHARTING THE PATH TO  
WINNING STRATEGIES**

Moderator: Jonathan Roberts, Pryor Roberts

**08:30****Keynote Address: Crafting A Sustainable Future**

**Keynote Speaker: Jean-David Tardif, President & COO, Cascades Tissue Group**

While tissue business faces multiple challenges in today's dynamic market, tissue products are no longer just functional; they are expected to align with lifestyle choices, consumer trends, and eco-friendly values. Keeping pace with these shifting demands requires continuous innovation and adaptability.

Cascades, which is celebrating its 60th anniversary of founding in 2024, is not only a pioneering in recycling and in the circular economy; it has also always passionately advocate for change and for a greener industry.

**09:00****The Normalisation of Global Conflict**

**Mark Goddard, Partner, Director, SecureValue**

Tumultuous world order threats are becoming the norm and impacting global business. Political election cycles test these ethics with the continuing rise of populist governments with unpredictable foreign policies. Russia's invasion of Ukraine is approaching its two-year anniversary. The catastrophic Israel/Hamas conflict could act as the catalyst for a new wave of global terrorism. These conflicts also spur smaller linked opportunist actions. 2023 is the 10-year anniversary of China's Belt and Road Initiative (BRI) - increasingly seen as the country's main tool to embed its autocracy and reset the balance of world power from west to east.

**09:30****The Power Of Purposeful Marketing: Connecting  
Brands With Consumers**

**Susan Irving, Chief Marketing Officer, Kruger**

In the world of marketing, the power to drive both people and business growth lies within the core purpose of a brand. Brands centered around a meaningful purpose not only earn greater trust but also experience increased sales. While most CPG advertising emphasizes a product's functional benefits, a shift in focus toward understanding how products contribute to consumers' lives presents an untapped opportunity. This presentation focuses on how Kruger Products finds a genuine purpose for household tissue paper products in consumers' lives. A balanced approach encompassing both 'functional' and 'emotional' attributes is crucial to creating connections with consumers.

**10:00****Session 1: PANEL DISCUSSION**

**Panelists :**

- Jean-David Tardif, President & COO, Cascades
- Esko Uutela, Principal, Tissue, Fastmarkets
- Mark Goddard, Partner, Director, SecureValue
- Susan Irving, Chief Marketing Officer, Kruger

**10:20 – 10:50****Conference Refreshment Break****Senior Management Symposium****SESSION 2 - MANAGING SUPPLY-SIDE  
VOLATILITY**

Moderator: Jonathan Roberts, Pryor Roberts

**10:50****Pulp In A VUCA Environment**

**Guilherme Viesi, Chief Commercial Officer, CMPC**

Since the 90s tissue demand has stepped in to fill the void left by the declining demand in the P&W sector. It now figures as the largest end-use for market pulp and is expected to continue its expansion in the years ahead. While various commodities experience fluctuations influenced by several different factors, this presentation will delve into the ones affecting pulp volatility. Moreover, this session will address the inherent volatility stemming from unforeseen black swan events, including but not limited to fires, floods, droughts, supply chain disruptions, pandemics, and other unexpected events.

**11:15**
**From Stumps To Rolls: Understanding And Navigating Supply Chain Volatility**
**Trip Jobe, VP, Sales - Forest Value Chain, North America, ResourceWise**

Over the last eighteen months, the markets in the forest products supply chain have undergone a period of exceptional volatility, driven by a complex interplay of factors. This presentation will provide an in-depth examination of the multifaceted aspects of the forest products industry. It will explore the challenges and opportunities brought about by shifting dynamics in supply and demand, government regulations, and the rising interest in alternative markets, such as bioenergy. It will also provide an understanding of market imbalances, the critical decisions faced by industry stakeholders, and the changing sustainability landscape.

**11:40**
**Making Mill Security as Easy as 1 2 3**
**Mattias Gidlof, Global Cyber Security Solutions Consultant, ABB**

The security threat landscape is increasing, and cyber-attacks are becoming increasingly more sophisticated and frequent. ABB security expert, Mattias Gidlof will share how ABB is taking steps to demystify security within pulp and paper mills, making it easier than ever to provide an end-to-end industrial cyber security approach to address the modern threats of today and tomorrow.

**12:05**
**Session 2: PANEL DISCUSSION**
**Panelists :**

- **Guilherme Viesi, Chief Commercial Officer, CMCP**
- **Trip Jobe, VP, Sales – Forest Value Chain, North America, ResourceWise**
- **Mattias Gidlof, Global Cyber Security Solutions Consultant, ABB**

**1225 - 1500**
**Flexi-time: Conference Luncheon and Exhibit Visits**
**Technical Sessions**
**SESSION 1 - TISSUE VALUE CHAIN: OPTIMIZING TODAY**
**Moderator : John Holton, Technical Service, Toscotec**
**15:00**
**Discover The Path To Energy Efficiency And Enhanced Production**
**Arvid Johansson, Director, Tissue Mills Technology, Valmet**

Valmet showcases mill cases where conventional press systems upgraded to flexible press technology resulted in significant energy savings, enhanced production, and improved creping conditions. The presentation highlights converting line stability, enhancing mill workflow efficiency.

**15:20**
**Alternative Approach To TAD Production In The "Climate Change" Era**
**Luca Linari, General Manager, Andritz Novimpianti & Paul Richards, Sr. Technology Manager, Tissue, Andritz**

Energy Transition: A major tissue producer's shift from natural gas to eco-friendly syngas and hydrogen gas solutions for tissue drying, efforts to elevate solids content in TAD drying phase through successful trials conducted on the Andritz tissue pilot machine.

**15:40**
**Explore Tissue Excellence With 100% Eucalyptus Fiber (BEKP)**
**Manoel Faez, R&D Specialist, Suzano**

Suzano reveals successful cases of tissue production exclusively from Bleached Eucalyptus Fiber (BEKP). Key steps for premium quality tissue products and insights into Eucalyptus properties, best practices for production, quality, and product portfolio optimization.

**16:00**
**New Polymer for Tissue Stickies**
**Albert Allen, Principal Specialist, Deposit Control, Pulp and Paper Americas, Kemira Chemicals**

Raw material and water conservation efforts lead to increased levels of micro hydrophobic (HP) particles creating production and converting issues in tissue manufacturing. A holistic solution utilizing a new chemistry and novel online monitoring to minimize the concentration of HP particles in the tissue process, thus minimizing their negative impact, is presented. The application of these novel polymers, that have a demonstrated affinity toward HP particle retention in tissue furnishes, allow them to be effectively purged from the process.

**16:20**
**Staff Turnover Management: Which Training Solutions To Apply?**
**Isabelle Baret, CEO, & Celine Destenay, Assistant Manager, IBC Training**

At a time when our industry is facing increasing staff turnover, an effective training solution for your production operators is crucial. Goals: 1- Make unskilled operators rapidly autonomous and qualified for the job 2- Develop their skills, making them multi-talented How: By adopting solutions for transferring knowledge and know-how internally on the job via organized, fun and effective training courses. Benefits to the industry: staff management, human resources, training solutions, productivity, staff optimization.

# CONFERENCE AGENDA

16:40

## **Automation: The Key To Success (Case History Presented Together With PSAG)**

**Sergio Tonarelli, Chief Sales Officer, Futura Converting & Eng. Maximo Gagliardi, President, PSAG - Papelera San Andres de Giles & Sebastian Schiaffino, PSAG - Papelera San Andres de Giles**

In the realm of extreme Automation, US premium and ultra-premium producers lead. They tackle challenges like frequent reel changes, cost constraints, and environmental impact. PSAG, a tissue producer in Argentina, embraced sustainable automation, evolving into one of the world's most advanced paper mills.

17:00

## **An Absolute Excellence In Packaging**

**Veljko Zlatanovic, PLM Leader, STAX Technologies**

Secondary packaging in polyethylene bundles is still very present on the global market. The latest trends with the aim of preserving the environment are slowly changing the market towards packaging in cardboard boxes. Diversa is a hybrid machine that has the ability to quickly pack boxes as well as reliably wrap them in foil. Changing the packaging technology does not require neither the addition nor replacing of modules, but only the change of parameters and the choice of packaging method.

17:20

## **Palletizing - Flexible And Fast**

**Luc Vanden-Abee, Marketing Manager, NūMove**

The proliferation of SKUs demands greater flexibility for any automation initiatives. End-of-the line automation needs to keep up with the new higher throughputs while being flexible enough to accept the actual and future SKU sizes and formats. The latest robotic technologies provide a solution that meets the speed and flexibility requirements. The presentation will summarize the technical challenges encountered to implement a high-speed robotic palletizer for a new facial tissue production line handling up to 100 different products and the benefits of this solution.

17:40

## **Closing of Tissue World Miami 2024 Conference Day 1**

## **THURSDAY, FEBRUARY 1, 2024**

### **Senior Management Symposium**

#### **SESSION 3 - TAKING THE INITIATIVE FOR LONG-TERM BUSINESS SUSTAINABILITY**

**Moderator: Jonathan Roberts, Pryor Roberts**

08:30

#### **Multipolar Geopolitics And The Impact On Trade**

**Jacob Shapiro, Partner, Director, Chief Strategist, Perch Perspectives & Cognitive Investments**

The world is moving away from a model of globalization toward a multipolar environment of regional spheres of influence, featuring trade protectionism, rewriting of global supply chains, and supply side economic issues like inflation and shipping disruptions. This presentation will explore how geopolitics is affecting aspects of the global economy like energy, trade, currency, and technology and extrapolating from topical examples in the headlines today will demonstrate why this is a time of tremendous opportunity - for those willing to discard preconceived notions about how the world works and to embrace the impact geopolitics is having on the global economy.

08:55

#### **Decarbonizing Tissue – Progress And Potential For The North American Tissue Industry**

**Soile Kilpi, Director, AFRY**

The NA tissue industry consists of over 20 companies, each with their own set of considerations: manufacturing concepts; scale; asset age; fibre type; location; energy source and fuel type; target market and many more to consider. There is a unifying issue: how to consider and embody sustainability, specifically decarbonization, throughout the manufacturing processes? Looking at how the tissue industry is tackling these topics, with a focus on scope 1 and 2 emissions criteria, and at how decarbonization targets have developed and driven the industry in terms of: energy efficiency; renewable energy generation; changing fiber choices; and packaging considerations.



**09:20**
**Envisioning Carbon-Free Tissue Production**
**Bruce Janda, ResourceWise**

The tissue-making process is one of the most energy-intensive papermaking processes, accounting for only 9% of global paper production tons but 14% of total scope 1 and 2 yearly carbon emissions on the machine. Tissue manufacturers have increasingly focused on strategies for reducing or offsetting carbon emissions. Low or carbon-free drying equipment is available, and several tissue machines are running or planned as demonstration projects. This paper looks at the scope and variability using the ResourceWise FisherSolve Next™ system to identify some of the critical steps required to reduce the carbon footprint.

**09:50**
**The Future Of Bamboo Tissue As A Sustainable Option**
**Joslyn Faust, Founder, HeyBamboo**

What happens when a tissue brand is born from the pandemic? The pandemic shone a spotlight on the global consumer tissue market like never before, and it highlighted the importance of truly sustainable and healthy options for homes. It also resulted in increased consumer willingness to try more eco-friendly tissue products and smaller brands. This was the backdrop in the founding of unbleached bamboo toilet paper brand HeyBamboo.

**10:15**
**SMS Session 3 – PANEL DISCUSSION**
**Panelists :**

- Jacob Shapiro, Partner, Director, Chief Strategist, Perch Perspectives & Cognitive Investments
- Michael Drage, President North America, Toscotec
- Soile Kilpi, Director, AFRY
- Joslyn Faust, Founder, HeyBamboo

**10:35 – 11:00**
**Conference Refreshment Break**
**Senior Management Symposium**
**SESSION 4 - EXCEEDING CUSTOMERS EXPECTATIONS:**
**STAYING AHEAD IN THE MARKET**
**Moderator: Jonathan Roberts, Pryor Roberts**
**11:00**
**Outlook For Global Consumer Tissue And Opportunities Amid New Consumer Reality**
**Liyang Qian, Industry Manager for Tissue & Hygiene, Euromonitor**

As the world grapples with a new economic reality shaped by inflation, geopolitical tensions, demographic shifts and a climate crisis, understanding shifts in consumer lifestyles, value perceptions and priorities are pivotal for identifying key trends and short-term to long-term growth opportunities in consumer tissue industry.

This presentation discusses:

- The state of the global consumer tissue in the context of inflation, including short-term and long-term forecasts;
- Ways consumers are balancing budgets and lifestyle choices;
- Strategies to adopt and differentiate to meet consumer shifts in the coming years.

**11:25**
**Decoding EUDR: Navigating Practical And Commercial Realities In The Global Pulp And Tissue Industry.**
**Mikael Selling, CEO & Partner, Opticom & Marcus Hellberg, Sales Director, Pulp, SCA**

An overview of the practical and commercial dimensions of the new EU Deforestation Regulation (EUDR), specifically from the perspective of the pulp and tissue industry, and an illustration on how EUDR influences the market and trade dynamics and what the potential impact on the supply chain could be. The presentation offers insights on how to navigate this transformative regulatory landscape successfully and share insights from key stakeholders and policy makers in the tissue value chain.

**11:50**
**Clean Living, How Sofidel America Works To Meet Market Challenges And Customer Needs**
**Derek Dafoe, Executive VP, Marketing & Sales, Sofidel America**

Entering North America – understanding the marketplace and creating a map to success. Accomplishments to date – update on where we are 11 years later. Vision for the future – where does Sofidel see the North American market in 10 years. Points of Difference in a commodity driven future – how will Sofidel drive future growth.

# CONFERENCE AGENDA

**12:15****SMS Session 4 – PANEL DISCUSSION**

Panelists :

- Liying Qian, Industry Manager for Tissue & Hygiene, Euromonitor
- Mikael Selling, CEO & Partner, Opticom & Marcus Hellberg, Sales Director, Pulp, SCA
- Derek Dafoe, Executive VP, Marketing & Sales, Sofidel America
- Michael Urlick, Senior VP & General Manager, Consumer Products Division, Clearwater Paper

**1235 - 1500****Flexi-time: Conference Luncheon and Exhibit Visits****Technical Sessions****SESSION 2 - TISSUE VALUE CHAIN:  
APPROACHING TOMORROW**

Moderator: Bodo Kottwitz, B-Kay Tissue

**15:00****Automated Truck Technology**

Stephan Lariviere, Sector Director – Consumer Hygiene Products, FPIInnovations

Truck platooning involves electronically linked trucks led by an experienced driver, addressing labor shortages and enhancing transportation efficiency. Spearheaded by FPIInnovations, the project receives funding to reduce GHG emissions. Advantages include safer roads, reduced emissions, and positive socio-economic impact, supporting the global transition to a net-zero economy.

**15:20****Discover The Fully-Electric Tissue Mill**

Gabriele Romanini, Sales manager – Tissue Division, Toscotec

Toscotec presents a tech solution for future tissue mills, shifting to renewables through energy recovery. Proven energy-saving methods ensure peak tissue production.

**15:40****The Shoe Press Excellence**

Denny Di Vita, Sales Manager, ACelli

The paper industry faces competitiveness challenges and environmental concerns. A.Celli's ShoePress innovation, developed with PMT's input, revitalizes dated facilities. A case study details the process, from idea to operational implementation.

**16:00****Unveiling a Revolutionary Pulping System**

Neale Fetterly, Sr. Applications Engineer, Kadant Black Clawson

Kadant introduces the Helidrum Pulping System, handling contaminated papers without traditional detrasher limitations. Commercial installations illustrate its potential.

**16:20****Innovative Dry Strength Biopolymers**

Scott Good, RVP, Americas, Ecosynthetix

EcoSynthetix offers sustainable biobased dry strength tech for tissue producers. The case studies presented will show significant improvements in tensile strength, reduced basis weight, dusting, and breaks, enhancing overall efficiency without environmental impact.

**16:40****Multi-Functional Approach For AfH**

Nic Nehring, Associate Manager, Sales, Solenis

This presentation reviews the commercial implementation of a new multi-functional chemical additive in recycled AfH towel production that delivered significant energy savings, productivity improvements, and chemical additive synergy. The demonstrated improvement in dry tensile strength allowed complete elimination of refining on treated grades, productivity increases as high as 14% and reductions in PAE wet strength addition level to the point where total chemical cost was nearly neutral when including the cost of the new multi-functional additive.

**17:00****Reducing Total Cost Of Ownership (TCO) By  
Leveraging On Simplicity, Modularity And Automation**

Matthew Kowalski, Account Executive, Valmet Tissue Converting

Tissue manufacturers seek innovative solutions amid rising production costs. Valmet Tissue Converting introduces critical decision-making tools estimating expenses associated with converting equipment. Simplification, modularity, and automation are prioritized. Its offerings include the Perini MyGo preconfigured line, Perini MyWiz modular bundle line, and flexible packaging equipment.

17:20

**A New Packaging Solution****Massimo Capisani, Vice President, Pulsar America**

Unlike traditional machines, ANTARES comprises modules for stacking, filling, and palletizing products with unmatched flexibility. ANTARES adapts to diverse formats: rectangular, square, and various tissue products. It minimizes format change-over time and handles different packaging types, from flexible films to cardboard boxes, simultaneously.

17:40

**Closing of Tissue World Miami 2024 Conference Day 2****FRIDAY, FEBRUARY 2, 2024**

08:30

**KEYNOTE ADDRESS****Fabio Perini – In His Own Words****Keynote Speaker: Fabio Perini**

Vision for the tissue factory of the future: Competitive, Sustainable. Perhaps Surprising.

**TISSUE WORKSHOP: CONTRIBUTING TO THE BLUEPRINT FOR A SUSTAINABLE TISSUE BUSINESS OF TOMORROW****Workshop Moderator: Bodo Kottwitz, B-Kay Tissue**

09:00

**What Does A Sustainable Business Mean?****Ulf Johnsson, Concept Manager Mill Technology, Valmet**

How can a tissue mill contribute to reduce the direct environmental impact by adopting a circular resource flow? Based on concrete examples, showing possibilities for alternative fuels and raw materials, how to take care of excess heat, effluent water and in the end how waste can be turned into valuable resources. Adopting a holistic approach looking beyond the normal boundary limits, stretching out to other businesses, involving the community and benefit from already commercialized technology to become more sustainable!

09:30

**Quantifying The Impact Of Global Megatrends: A Deep Dive Into Digitalization, Social Changes, Sustainability, And Their Effects On Fiber Technologies.****Ronalds Gonzalez, Associate Professor & Keren Vivas, North Carolina State University**

Professor Gonzalez and his research team from North Carolina State University are exploring the future of fibers in the hygiene tissue industry: The powerful impact of global megatrends, alternative fibers and technologies, cutting-edge techniques for profiling carbon footprint and enhancing sustainability in both conventional and alternative fibers.

10:00 – 10:45

**TISSUE WORKSHOP: Contributing to the Blueprint for a sustainable tissue business of tomorrow - Workshop Groups and Discussions**

10:45 - 11:30

**PANEL DISCUSSION and Presentation of the Workshop Discussions and Conclusions by the workshop moderators:**

- Bud Chase, VP – Tissue, EDT – Enzymatic Deinking Technology
- John Holton, Technical Service, Toscotec
- Ulf Johnsson, Concept Manager Mill Technology, Valmet
- Ronalds Gonzalez, Associate Professor, North Carolina State University
- Keren Vivas, North Carolina State University

11:30

**End of Tissue World Miami 2024 Conference**



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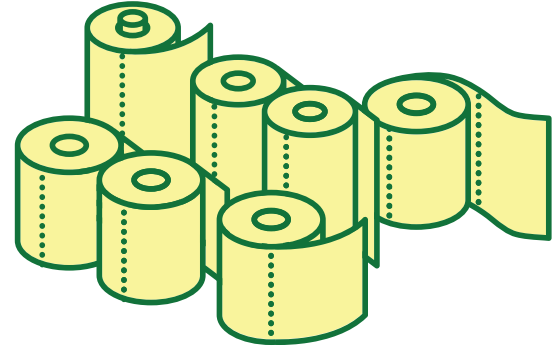
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# EXHIBITOR PROFILES



## 9. Septembar - Tissue Converting E40



[info@9septembar.com](mailto:info@9septembar.com)  
[www.9septembar.com](http://www.9septembar.com)

9. Septembar - Tissue Converting is a manufacturer of tissue converting machinery from Serbia, Europe. The company successfully produces machines for napkin and handkerchief production, as well as rewinders and slitters for more than 40 years. Besides these well known machines, our product range includes machines for tablecloths, placemats and dental bibs. Various models may fulfill each customer's demand, from hobby program to fully automated turn key solutions.

More than 400 9. Septembar machines successfully operate in more than 40 countries world wide.

## A.Celli Paper F70



[s.morgantini@itaholding.it](mailto:s.morgantini@itaholding.it)  
[www.acelli.it](http://www.acelli.it)

A.Celli Paper has a long experience in paper and tissue paper machinery and equipment market, offering advanced solutions for complete turnkey plants, tissue machines, winders and rewinders for tissue, paper and cardboard, roll handling and packaging. With the acquisition of PMT (formerly Beloit) in 2020, the company becomes the leading player in the sector with a 100% Italian ownership, extending its range of products and services to the specialty paper, graphic paper and packaging paper industries.

## Adhesives Research Inc G64



[ralla@arglobal.com](mailto:ralla@arglobal.com)  
[www.adhesivesresearch.com](http://www.adhesivesresearch.com)

Adhesives Research (AR) is a global leader in manufacturing High Performance ARclad® tapes for applications within Paper & Pulp, Flexible packaging, Hygiene and Converting Industries. Our splicing tapes are developed specifically for the advanced processes that present difficult splicing conditions found in web production, coating, laminating, printing, and converting applications to provide superior adhesion in varying temperatures and line speeds.

## Air Systems Design Inc. E50



[sales@airsystemsdesign.com](mailto:sales@airsystemsdesign.com)  
[www.airsystemsdesign.com](http://www.airsystemsdesign.com)

Since 1982, Air Systems Design, Inc. has provided on a "turnkey basis" customized dust systems and broke systems for winder trim systems. Our company takes pride in manufacturing our own separators, paper handling fans, dust hoods, floor sweeps and continuous floor cleaning systems under the winder. In addition to our line of products, ASDI represents a complete line of shredders, wet scrubbers, filters and no-shred baler. ASDI is a member of ISN, NFPA & TAPPI.

## Aktül Kağıt Üretim Pazarlama A.Ş. D70



[mehmet.coban@aktulkagit.com.tr](mailto:mehmet.coban@aktulkagit.com.tr)  
[www.aktulkagit.com.tr](http://www.aktulkagit.com.tr)

Aktül Kağıt started producing tissue paper in its facilities located in Pamukova/ Sakarya in 2011. Aktül Kağıt, built on a total area of 186,615 m2, including 115,644 m2 open and 70,971 m2 closed, has a paper production capacity of 210,000 tons/year and a converting production capacity of 160,000 tons/year. In 2021, it broke a world record with the KM-1 machine, one of the 3 paper machines it owns, with the production of 75,276 tons per year. Backed by its strong R&D and quality assurance structure since its establishment, it has adopted a sustainability approach that has seen working with high quality standards as one of its main objectives, and an environmentally friendly production approach by integrating high technology with modern production and management systems. It became a pioneer in the paper industry with "Visconip Technology", which was used for the first time in the Turkish market. In order to meet world-class customer needs, it increases its production capacity with new investments every day, and by exporting to a total of 60 countries in the domestic and international markets, it meets the demands of consumers for toilet paper, paper towels, napkins and wipes, as well as the high quality semi-coil needs of converting facilities.

### Alvarez Ultra Tissue Machinery Engineering E24



[alvarezultra.com](http://alvarezultra.com)

Alvarez Ultra Tissue Machinery has over 50 years experience designing and manufacturing advanced machinery for the worldwide paper and tissue market. We create fully automated turnkey solutions for tissue and paper products, including toilet rolls, napkins, towels, diapers, paper straws, face masks, and much more. We also offer Turnkey operation, which includes conveyors, bagging, wrapping, packaging, and palletizing.

### Alwin Manufacturing Co. Inc. E51



[www.alwin.com](http://www.alwin.com)

Since 1928, Alwin Manufacturing Co., Inc. has been a leading producer of towel, tissue and napkin dispensers for the away-from-home market. From our location in Green Bay, Wisconsin, Alwin supplies hundreds of thousands of dispensers to the domestic and international marketplace, continuing to do what we do best... manufacturing quality dispensers.

### Andritz Inc. B20



[tissue@andritz.com](mailto:tissue@andritz.com)

[www.andritz.com/group-en](http://www.andritz.com/group-en)

Passion for innovative technologies that shape the world  
ANDRITZ is an international technology group providing plants, systems, equipment, and services for various industries. The company is one of the technology and global market leaders in the hydropower business, the pulp and paper industry, the metal working and steel industries, and in solid/liquid separation in the municipal and industrial segments.

### Apex International F75



[apexinternational.com](http://apexinternational.com)

APEX INTERNATIONAL IS THE GLOBAL LEADER OF ANILOX AND EMBOSsing TECHNOLOGIES  
Global Manufacturing Across 7 Locations  
World's Largest Anilox Roll Manufacturer  
11,000+ Customers Globally  
Service In More Than 110 Countries  
150+ Years of Experience In Embossing  
True OEM Specifications

### Baker Titan B91



[www.baker-titan.com](http://www.baker-titan.com)

BakerTitan Adhesives manufactures the full line of tissue/towel converting adhesives. We supply small, independent, single line converters and larger national brands and contract converters. Our products are used across all product lines whether it's Away-From-Home or consumer grade TAD paper, our products offer the highest level of performance in the industry.

### Baosuo Paper Machinery Manufacture Co., Ltd. D40



[www.baosuo.com](http://www.baosuo.com)

Baosuo Paper Machinery Manufacture Co., Ltd., established in 1989, is a well-known corporation which specializes in machinery for tissue. We uphold the business strategy of basing on domestic market and going global, which helps to lay the foundation for building our global well-known brand. Our products include tissue making machines, tissue converting machines, tissue packaging machines and electric intelligent systems. We are dedicated to providing the best tissue production turnkey solution and first-class service from design, manufacturing to installation.

### Bashundhara Paper Mills Ltd. G24



[info.paper@bgc-bd.com](mailto:info.paper@bgc-bd.com)

[www.bashundharapapermills.com](http://www.bashundharapapermills.com)

We Are Passionate About Helping The World Excel In Education, Communication, Business & Salutariness By Offering Eco-sustainable Paper-based Solutions.

### Buckman International B40



[www.buckman.com](http://www.buckman.com)

Buckman is completely committed to helping you succeed, regardless of the challenges facing you, the industry you operate in or your location in the world. We're all focused on helping your operation improve productivity, increase profitability and ensure safety, compliance and sustainability. We are Chemistry, connected.

### C. G. Bretting Manufacturing Co., Inc. F10



[sales@bretting.com](mailto:sales@bretting.com)

[www.bretting.com](http://www.bretting.com)

Bretting proudly celebrates 130 plus years! Focusing on designing and manufacturing tissue and towel converting equipment with a dedication to industry leading service and support. Our innovative solutions throughout our interfolder and napkin folder product lines continue to expand. Absolut, a Bretting company, has enhanced our current product line, offering paper bag equipment, wet wipe and non-woven folding and rewinding equipment. We continue the LEAN Journey along with our on-going research and development providing the competitive advantage best value solutions. As a World Class manufacturer, Bretting delivers on our promise, earning the right to be the customer's choice.



## Cellwood Machinery AB

G10



Cellwood Machinery

[sales@cellwood.se](mailto:sales@cellwood.se)  
[cellwood.se](http://cellwood.se)

Cellwood Machinery will showcase its successful main brand products. KRIMA: The market leading hot dispersing system designed to make your paper cleaner and stronger, and at the same time lowering furnish and operational costs. GRUBBENS: Pulpers, well known for both UTM and bale installations, gives unparalleled reliability and energy savings. ALGAS: Microfilters for a safe reuse of process water. METRANS: A complete supply of custom-made Bale/Broke handling equipment.

## Charta Global Inc.

G70



[www.chartaglobal.com](http://www.chartaglobal.com)

Charta Global Inc., headquartered in Orange, CA, provides one of the paper industry's most comprehensive product portfolios throughout the US and Latin America. Charta offers an extensive line of plastic-free, compostable paperboard for foodservice and consumer goods food packaging, as well as a full breadth of printing and copy papers, kraft, colored, brief card, wood-free, carbonless, thermal, art, specialty papers and jumbo roll tissue products. Retailers, brands, wholesalers, traders, distributors and merchants rely on Charta's robust and diverse product offering. As the exclusive sales channel of APP, Charta Global leverages a state-of-the-art R&D network and leading sustainability practices of one of the world's largest fully integrated pulp and paper manufacturers with more than 20 million metric tons of paper and board manufacturing capacity.

## Clear-Com

D91



[SalesSupportUS@clearcom.com](mailto:SalesSupportUS@clearcom.com)  
[www.clearcom.com](http://www.clearcom.com)

Up to 100 words editorial: Clear-Com, an HME company, is a trusted global provider of professional real-time communications solutions and services, innovating market proven wired and wireless technologies. Our history of technological advancements and innovations has delivered significant improvements to the way people collaborate in professional settings where real-time communication matters.

## Clouth Sprenger GmbH

E44



[www.clouth.com](http://www.clouth.com)

MAKING GOOD THINGS EVEN BETTER Clouth Sprenger GmbH is a medium-sized company that was founded in 2002 and that operates as a supplier of special tools for the paper industry. Production and refinement of coating coater blades and creping blades with high quality wear protection coatings takes place at the Moers production site. The pioneering processes in the field of refinement benefit our customers twice over: The longer service life of the products not only maximise productivity, but also significantly improve the paper quality. The use of state-of-the-art injection and grinding technologies enables extremely environmentally friendly production processes. Furthermore, the site produces machine components for the paper industry, particularly the GALENO creping blade system.

## Convermat Corporation

D50



[info@convermat.com](mailto:info@convermat.com)  
[www.convermat.com](http://www.convermat.com)

The global leader in tissue. Providing tissue, pulp, packaging, and nonwovens worldwide with service, speed, reliability, and integrity since 1976. Led by Shaw and Frank Shahery, Convermat is the leading global supplier of parent rolls of tissue, pulp, packaging, and nonwovens, operating in more than 80 countries worldwide. Our mission is to develop long-term partnerships with our clients as their trusted source and supplier. We provide our clients with the most competitive products and prices so they can better focus their efforts on achieving their goals and objectives. We stand for long-term partnerships, integrity, and environmental and social responsibility.

## CR Meyer

A22



[crmeyer.com](http://crmeyer.com)

CR Meyer is an industrial general contractor with ten offices located across the United States. With over 135 year's experience, we are an industry leader in the pulp and paper industry. From supporting maintenance efforts, installing new equipment, or providing design/build services, we deliver optimum constructability to meet your most rigorous quality, budgetary, and timeline objectives.

## Dean Machinery International, Inc.

C24



[www.deanmachinery.com](http://www.deanmachinery.com)

Worldwide appraisers and suppliers of quality equipment for printing and converting paper, film, foil, tissue and flexible packaging products. We provide customers with full service to a broad, but related spectrum of equipment categories for printing and converting paper, film, foil, tissue and flexible packaging products.

## DuBois Chemicals

G72



[www.duboischemicals.com](http://www.duboischemicals.com)

DuBois Chemicals is a leading single source specialty chemical supplier. DuBois superior chemistries and technical support help ensure you consistently produce high quality beverages. Our technologies are designed to solve deposit control problems caused by recycled fiber 'stickies', strength resins, creping/release chemistries, debonder chemicals, wood pitch, CMC, fines, and other troublesome soils.

### E80 Group Inc.

C10



[www.e80group.com](http://www.e80group.com)

E80 Group specializes in the development of automated and integrated intralogistics solutions for factories and distribution centers in various business fields. The tissue sector has been an important stepping stone for the Group, which started designing and producing tailor-made solutions perfectly suited to the automatic handling of parent reels.

### Eczacıbaşı Consumer Products Co.

A42



[www.eczacibasituketim.com](http://www.eczacibasituketim.com)

Offering new and innovative hygiene products to consumers for over 50 years in personal&household&baby care and AFH categories. ECP, serves neighboring markets through the manufacturing, marketing, and distribution of tissue paper products by investing in the Paper category that enable its total production capacity to reach 250 thousand tons.

### Edson Packaging Machinery Ltd

D10



[www.edson.com](http://www.edson.com)

Today Edson manufactures case and tray packing systems with unrivalled expertise in handling delicate tissue and paper-based products while maintaining high levels of packing performance. Edson's core offerings include high-speed horizontal case packing, product handling, and integrated solutions. Like their machinery, Edson's relationships with their customers are built to last, achieving a legacy of excellence with the most renowned tissue converting companies. Edson is a product brand of ProMach, a global leader in packaging line solutions. As part of the ProMach Robotics & End of Line business line, Edson helps our packaging customers protect their reputation and grow the trust of their consumers.

### EDT - Enzymatic Deinking Technologies F30



[www.edt-enzymes.com](http://www.edt-enzymes.com)

EDT – Enzymatic Deinking Technologies, LLC – produces enzyme-based products that help pulp and paper mills reduce costs while increasing the quality and quantity of the pulp and paper they produce. With extensive experience in the pulp processing industry, EDT knows how to integrate these improvements quickly and seamlessly, for a rapid improvement in economics without disruption of normal plant activities. EDT is a proven solution at more than 50 mills around the world.

### Emirson Global Kimya Sanayi Anonim Sirketi C75



[info@emirson.com.tr](mailto:info@emirson.com.tr)

[www.emirson.com.tr](http://www.emirson.com.tr)

EMIRSON Global's goal, as a partner, is to meet customer demands in the most efficient way, at the right time with right materials. We offer a wide range of products, enabling you to expand your business strategically with new opportunities.

- Horeca & Consumer Tissue Paper Products
- Tissue Jumbo Rolls
- Baby Diapers
- Sanitary Napkin
- Wet Wipes
- Greyboard
- Spunlace and Airlaid
- Raw Materials for Hygiene Industry
- Chemicals for Forest Products Industry
- Carbon Black
- Laboratory Equipments
- Tissue Machine and Equipments
- Melamine
- Other Transit Operations

### Emtec Electronic GMBH

E73



[www.emtec-electronic.de/en](http://www.emtec-electronic.de/en)

Emtec Electronic, located in Leipzig, Germany develops and manufactures highly specialized test devices for the pulp and paper, nonwoven and textile industries. Approximately 30 independent representatives offer service and support for the innovative products in more than 80 countries. Founded in 1995 by Giseler Grüner, Emtec has introduced several cutting-edge test devices to the different industries over the years, all of which can be used to optimize processes and products. In addition, the instruments are effective in the development of new products, helping to achieve desired characteristics, as well as for troubleshooting and quality assurance. Quality, outstanding customer service paired with intuitive, user-friendly innovations: This is what emtec stands for.

### Enerquin Air Inc

G14



[info@enerquin.com](mailto:info@enerquin.com)

[www.enerquin.com](http://www.enerquin.com)

Custom Solutions Experts. We provide mills with unique solutions for paper and board drying, tissue drying, energy efficiency, and building ventilation. We take pride in offering the highest quality products with innovative engineering, design and manufacturing. Enerquin expertise includes: Paper and Board Drying Technology/ Tissue Drying Technology/ Energy Saving Solutions/ Building Ventilation/ DryRunnability Solutions

### Engineered Recycling Systems, LLC

D76



[engineeredrecycling.com](http://engineeredrecycling.com)

Engineered Recycling Systems takes decades of engineering experience and integration expertise to provide turnkey solutions. We design, service and install world-class recycling and dust control systems. By providing our customers with equipment and system designs that deliver unprecedented levels of quality and craftsmanship, our solutions increase efficiency and cut labor costs.

**EPIQ Machinery**
**F91**

[epiqmachinery.com](http://epiqmachinery.com)

EPIQ blurs the lines of a technology company and a heavy machinery manufacturer. Through its AD brand of equipment, EPIQ offers, to P&P industry, innovative solutions found around the paper machine from pulper feed, roll finishing to warehousing with AMR integrated solution systems. The AD K2K robotic dewiring offers unparalleled results. As for its Roll finishing machine, it pampers the rolls like no other system does. AD stands as a brand of reliability and trust. You win, we win.

**Essel Seluloz Ve Kagit Sanayi A.S.**
**F62**

[essel.com.tr](http://essel.com.tr)

We produce our environmentally friendly products with cellulose obtained from FSC certified forests.

**Europap Tezol Kagit Sanayi ve Ticaret A.S.**
**C60**

[www.tezol.com.tr/en/home](http://www.tezol.com.tr/en/home)

Europap Tezol is one of the leading tissue paper manufacturers which has four paper mills and two converting plants in two different facilities, located in Turkiye. The annual production capacity is 130.000MT. The basis weight range is between 14,5-36 gsm for all type of Tissue Paper (Facial Tissue, Toilet Paper, Napkin and Towel) The company is one of the few companies that can produce 100% recycled and 100% pulp and exporting Jumbo Roll more than 35 countries all around the world.

**Fan Separator GmbH G80**

[www.fan-separator.de](http://www.fan-separator.de)

The pioneer in separation technology "FAN SEPARATOR GmbH" - a company of the Austrian BAUER Group - is presenting its latest product upgrades. From the FAN "PSS" Separator, for separation of fibrous wastewater, the "SPS" for secondary sludge and the "BP" for the dewatering of pulper reject. FAN SEPARATOR: FANTastic for the paper industry and the environment!

**FIS Impianti SRL**
**F74**


[commerciale@fisimpianti.it](mailto:commerciale@fisimpianti.it)  
[www.fisimpianti.it](http://www.fisimpianti.it)

Established in 1969, FIS IMPIANTI is based in Cassina de' Pecchi, in outskirts of Milan on an area of 10.000 sq mt, of which some 3400 for workshop and warehouse and 1200 for offices. For more than fifty years FIS Impianti has been designing, developing, manufacturing and installing wrapping and handling systems for palletised items (with or without wooden pallet). By using plastic films the loads are fully protected during freight and stocking, both in-door and out-door. Despite being present in many markets FIS Impianti decided to focus on the paper and tissue production: a field where protection is very important. The first machine delivered to a paper mill dates back to the early '80s: it was a stretching film wrapping machine for paper rolls coming from the pope and destined to converting. Since then FIS specialised in this field producing semi-automatic of fully automatic wrapping machines. Furthermore we can supply a wide range of special equipment for paper rolls handling up to the final shipping stage. In the last years FIS has also developed brand new software for improving the production line of paper and tissue, in particular, our software can recognise the product, measure it, weight, transmit the data and/or printing them on the roll. Do not hesitate to contact us: we will be glad to offer our customers our experience and flexibility for the evaluation of projects and manufacturing of special, tailor made machinery.

**FNA Inc**
**E30**


[info@firefly.se](mailto:info@firefly.se)  
[firefly.se](http://firefly.se)

Firefly is one of the world's leading supplier of fire prevention systems to the process industry. Since 1973, Firefly has specialized in creating tailor-made systems of the highest technical standard, in order to protect the process industry from costly fires and dust explosions.

With a range of products and solutions covering everything from spark detection and water spray extinguishing to flame detection and water mist suppression, Firefly can offer a safe fire prevention solution for your company.

**Foshan Nanhai Dechangyu Paper Machinery Manufacture Co., Ltd B44**

[www.dechangyu.com](http://www.dechangyu.com)

DECHANGYU was established in 1988, is located in Nanhai, Foshan, Guangdong province, adjacent to the provincial capital Guangzhou, is a professional household paper tissue converting machines, paper machine and ancillary machinery manufacturer. After 30 years of development, now we have become a large company with own brand, and research, design, manufacture and sales departments. Assets of the company more than six million USD, covers an area more than 100,000 square meters, employs more than 300 experienced professionals, have over 50 national patents in the industry, products through the ISO9001: 2015 certification and CE certification. In 2014, Science and Technology Industrial Park, Sanshui Leping, our large-scale production base which is over 60,000 square meter put into use, our production capacity and strength again upgrade!



### Futura SpA

D30



[www.futuraconverting.com](http://www.futuraconverting.com)

Futura S.p.A. is the technological leader for the production of converting machinery for consumer and AFH tissue markets.

Futura invests considerable resources in R&D, including FuturaLab, where innovation takes shape and is tested in real operating conditions on a latest-generation converting line.

Futura's production site is in Lucca, Italy, while support is guaranteed worldwide through Futura North America and Futura Latin America, and service points in China, Japan and Australia.

Futura acquired Plusline in 2020. They have already transformed tissue converting automation and integration, including Together 2.0, which receives tissue logs directly from the rewinder, and generates packaged, shelf-ready rolls.

### Gambini S.p.A.

B50



beyond tissue

[info@gambini.group](mailto:info@gambini.group)  
[www.gambini.group](http://www.gambini.group)

Gambini S.p.A. is a family-owned Italian company that has been in the machinery-making business for over 150 years. They offer tissue paper converting lines, retrofit components and a 24/7 service assistance worldwide. Gambini's advanced consumer and professional tissue converting lines are designed for efficiency, flexibility and safety, with a focus on high-quality finished products. The revolutionary AirMill wet embossing technology creates additional value in tissue converting and paper mill production processes. Gambini's vision is to enhance people's health and well-being, going beyond tissue. They are committed to innovation and customer service, making them a leader in the global tissue field.

### Giotto Technologies Srl

D40



[info@giottotechnologies.com](mailto:info@giottotechnologies.com)  
[www.giottotechnologies.com](http://www.giottotechnologies.com)

The company was born in 2021 from the combination of the experience and deep knowledge of the Tissue Converting sector of a group of Italian professionals and engineers with the productive capacity of Baosuo Group, Chinese leader in the production of machinery for paper mills and tissue converting companies. Giotto Technologies is the first overseas R&D center of Baosuo Group with the aim of offering reliable and energy saving tissue converting machines and positioning itself as a real competitive alternative for customers who are looking for a tissue converting complete line. Giotto Technologies tissue converting lines have reduced energy consumption thanks to the motorization integrated into the rolls which allows the elimination of any transmission device such as reducers, belts, etc. and to obtain better control of the winding cams and electronic movement phases. To ensure the highest quality and greatest possibility for product development, our embossing laminators can be equipped with three R/S embossing units with the freedom of multiple configurations. Known configurations, such as DERL, DESL and Point to Point as well as new and innovative ones, as the combination of the above mentioned such as Point to Point + DESL or Point to Point + DERL etc. Furthermore, the use of latest generation electronic controls combined with an unique winding system, allows us to produce rolls while maintaining the highest quality standards both for the uniformity of the winding and for the high caliper retention. Giotto Technologies is able to supply complete Tissue Converting lines, for rolls and folded tissue products, from the unwinder, up to the packaging and palletizer. Furthermore, considering the completeness of Baosuo's machinery portfolio, Giotto Technologies can also appeal to tissue converting companies who want to become a paper mill realizing the complete integration of the production process from the tissue paper production to the finished products.

### Global Link & Supplies Inc.

F40



[sales@globallinksupply.com](mailto:sales@globallinksupply.com)  
[www.globallinksupply.com](http://www.globallinksupply.com)

Global Link & Supplies is an international supplier to the tissue industry headquartered in Miami, FL. The company specializes in selling to the converting sector and provides a wide range of parent rolls for both retail and away-from-home products. Other commodities supplied include corestock, recovered fiber, pulp, converted products, and machinery. Since its inception the company has offered to work with quality, understanding the needs of its customers and working every day to be more effective in providing each and every one of its services. Our comprehensive network allows us to find the best solution for our customers by providing solutions to their needs, which has positioned us as a strategic and reliable partner. Our multimarket approach is reflected in our growth and operations in Asia, Latin America, USA and Europe. Today we have a presence in over 20 countries around the world.

### Gravion USA

B81



[www.gravion.eu](http://www.gravion.eu)

Embark on a journey into the pinnacle of embossing excellence with Gravion, led by our Founder and CEO, Dietmar Buchholz. Gravion USA Inc., in collaboration with Christian Viviers, extends our precision expertise to the American market. Head of 3D Design, Dominik Buchholz, adds an aesthetic touch to our creations. At Tissue World 2024, witness Gravion's breakthrough – laser precision in steel at 5.5mm with 5-micron accuracy. We're not just the fastest; we set new standards, defining the future of embossing. Join us, where excellence knows no bounds.

## Gravity Padma Paper Industry LLP E62



[info@whiteorchidstissue.com](mailto:info@whiteorchidstissue.com)  
[www.whiteorchidstissue.com](http://www.whiteorchidstissue.com)

Welcome to White Orchid, the newest addition to the tissue paper manufacturing industry. We are a brand that specializes in creating premium quality tissue paper products that provide comfort, convenience, and sustainability. At White Orchid, we believe that our customers deserve the best. That's why we have invested in the latest technology and the finest quality materials to ensure that our products meet the highest standards of quality and performance. Our products range from kitchen towels to toilet tissues and napkins, all designed with the customer's needs in mind. We understand the importance of softness, strength, and durability in tissue paper products, and we have created our products with these qualities in mind. At White Orchid, we pride ourselves on providing exceptional customer service. Our team is dedicated to ensuring that every customer is satisfied with their experience, from placing their order to using our products. We offer fast and reliable shipping & competitive pricing to ensure that our customers get the best value for their money. Our brand is a symbol of excellence, quality, and sustainability. By choosing White Orchid, you can be sure that you are making a responsible choice for your tissue paper needs. Experience the luxury and convenience of our products and join the many satisfied customers who have made White Orchids their go-to brand for tissue paper products.

## Guangdong Imako Intelligent Equipment Co.,Ltd. D80



[imakomachine.com/en](http://imakomachine.com/en)

IMAKO has been dedicated to design, manufacture and supply automatic processing and packaging machinery for the tissue paper industry since 2011. The company is able to boast its expertise in the sector of tissue paper production, as well as personal care & hygiene products packaging, products to be packaged include facial tissues, folded paper towels, paper serviettes & napkins, toilet paper rolls, kitchen tissue rolls, diapers, and wet wipes, etc.

## Guangdong Zhidesheng Technology Co. Ltd. G60



[www.gdzds.cn](http://www.gdzds.cn)

With more than 30 years in the industry, we are innovator in tissue embossing solutions. Our business partners include Hengan, Vinda, APP China, C&S, the Chinese big four in tissue industry. All of them introduce new series of high end tissue with ZDS patented GLUEFREE LAMINATING EMBOSSERS. To have a look at the trending products, welcome to our booth.

## Hannecard Roller Coatings, Inc. G32



[www.asbindustries.com](http://www.asbindustries.com)

Our goal is to improve the everyday efficiency of our customers' production and the quality of their final product. We do this by providing exceptional roll covers and coatings in rubber, polyurethane, carbides, and ceramics. By marrying cutting-edge materials innovation with over 120 years of application expertise, we are confident of making a measurable improvement to the supply chains we support. Our customers rely on us to be their roller experts and we strive to be worthy of that trust.

## Hayat Kimya Sanayi A.S. E20



[www.hayat.com/en-ke](http://www.hayat.com/en-ke)

Established in 1987 and operating in the FMCG sector, Hayat provides employment to over 10.000 people in Turkey and international organizations by bringing 16 brands together with consumers such as Molfix, Bebem Natural in the baby care category; Molped in feminine care category; Joly, Evony, Goodcare in the personal health care category; Bingo, Gleen, Test, Has in the home care category; Papia, Familia, Teno, Focus, Nelex in the tissue category; Sholk in the pet care category.

Including Turkey, 21 production facility investments in 8 countries, including Egypt, Iran, Algeria, Russia, Nigeria, Pakistan and Vietnam; operating with sales and distribution companies in Morocco, Bulgaria, Kenya, Thailand and Malaysia; Hayat also continues to strengthen its regional position and deliver its brands to millions of homes around the world by exporting to more than 100 countries in 5 continents.

Hayat is the largest tissue manufacturer in the Middle East, Eastern Europe and Africa, and ranks 4th in the "World's Largest Branded Baby Diaper Manufacturers" league.

## Hell Gravure Systems GmbH & Co. KG C63



[info@hell.de](mailto:info@hell.de)  
[www.hell-gravure-systems.com/](http://www.hell-gravure-systems.com/)

HELL – the successful engraving industry brand

HELL Gravure Systems – a Heliograph Holding company – is an innovation leader in the manufacture of prepress engraving systems. As an inventor of pioneering technologies, the company is continuously redefining international standards. With its numerous technical solutions, HELL leads the market in its many core areas of expertise – the electromechanical and direct laser engraving of gravure and embossing cylinders and the high-resolution direct engraving of elastomer printing forms for relief printing. The latest industry highlights are the HelioKlischograph K5, the AutoCon automated production line with one or more HelioKlischograph K500 systems, and the Cellaxy and PremiumSetter direct lasers.

### Henrich (shandong) Health Technology Co. B77



[henrich.en.alibaba.com](http://henrich.en.alibaba.com)

Henrich (Shandong) Health Technology Co., Ltd. is located in Shandong Province, China. Our company focuses on environmentally friendly products, and the business categories cover household paper and feminine care products, including toilet paper, kitchen paper, toilet paper, facial tissues, napkins, wipes, nursing pads, diapers, sanitary napkins, tampons, menstrual cups, etc. Henrich has 20 years of industry experience, strong production capacity, leading technology, and rich production lines, and has obtained several certificates and patents. Good at designing and customizing diversified and differentiated products, providing one-stop collection and full-link butler services. Henrich's values are to be at the top of brand, morality, and quality, which has won the high recognition of the industry's leading brands and many well-known institutions.

### Hergen S/A Paper Machinery C33



[www.hergen.com.br](http://www.hergen.com.br)

Hergen is a developer of state-of-the-art solutions for the paper industry, with a manufacturing site with modern large machines and a unique infrastructure that allows the complete construction of the equipment. With approximately 250 professionals who form the staff of the industrial park located in Rio do Sul, a town in the center of the state of Santa Catarina – south Brazil, Hergen is dedicated to the development and manufacture of equipment and machines for the tissue, packaging and special paper segments. Founded in 1976, the company has international operations in Latin America, North America, Europe and Asia.

### Hinnli Co., Ltd. D80



HINNLI CO., LTD.

[www.hinnli.com](http://www.hinnli.com)

Hinnli Co., Ltd. is a manufacturer, exporter and turnkey project provider for paper converting and industrial machineries. The company has been established since 1992 by focusing on markets including Middle East, North/South America, South East Asia, Europe as well as the other areas. We are the leading manufacturer, exporter, turnkey project provider and system integrator focusing in paper converting, industrial machineries. In addition to single-unit machines and relevant components and parts.

### IBC Paper Training C70



[ibcpapertraining.com](http://ibcpapertraining.com)

IBC Paper Training, leader in training courses in the tissue industry and specialized in innovative digital solutions, making sure you train your staff actively.

### Ibercutting S.L F44



[info@ibercutting.net](mailto:info@ibercutting.net)

[www.ibercutting.net](http://www.ibercutting.net)

IBERCUTTING is a Spanish company specialized in the tissue converting sector. Our main activity is the sale of compatible spare parts for the main brands in the sector. We provide a fast and efficient service thanks to our large stock. We can supply a wide range of spare parts of any kind all over the world. In addition, we offer technical advice, purchase and sale of used machinery and 360° solutions adapted to our clients.

For more than 20 years, Ibercutting has grown thanks to the good work maintained throughout this time.

### ICM Makina Mühendislik Ltd C50



[icm@icmmakina.com](mailto:icm@icmmakina.com)

[icmmakina.com](http://icmmakina.com)

ICM Makina is a tissue converting equipment manufacturer with its own design team. Established in 2006 and installed in more than 86 countries all around the world from Canada to China

### IMA - TMC SPA B10



[www.ima.it](http://www.ima.it)

For over two decades IMA TMC (Tissue Machinery Company) has been offering the most innovative solutions to handle and solve the complexities related to the packaging and handling of Tissue and Personal Care products. Based in Italy with a worldwide network of sales and after-sales services, IMA TMC's core business is the packaging of tissue products, with a full array of excellent machinery dedicated to wrapping and bundling Kitchen, Bathroom and AFH tissue rolls. The experience of IMA TMC in developing ultra-flexible and high-speed tissue roll packaging machines, encouraged the Company to develop a range of primary and secondary packaging machines for the nonwoven sector. IMA TMC packaging lines for the Tissue & Nonwoven market can be completed by turnkey palletizing systems and transport conveyors. These solutions are completely designed and manufactured at TMC headquarters in Italy.

### Indevco Paper Making D60



[papermaking@indevcogroup.com](mailto:papermaking@indevcogroup.com)

[www.indevcopapermaking.co](http://www.indevcopapermaking.co)

INDEVCO Paper Making, a division of INDEVCO Group, operates two manufacturing companies in Lebanon and Egypt, UNIPAK Tissue Mill (UTM) and Interstate Paper Industries (IPI). Our plants produce 90,000 MT/year of virgin and recycled tissue parent reels for tissue converters in the USA, Europe, the Middle East and Africa. IPM focuses on sustainability initiatives throughout the manufacturing process.



**Infinity Machine &  
Engineering Corp.**
**B30**

**infinitymec.com**

Infinity Machine & Engineering Corp. is a world-wide leading manufacturer of automated packaging machinery for the tissue paper industry. We are also a provider of engineering services for all tissue product converting. Infinity has full-service sales, service, engineering, and manufacturing facilities in both the Green Bay, WI (USA) and in Bologna (Italy), two cities considered to be the tissue packaging capitals of the world. For as long as our value proposition satisfies our markets and our customers, our intention is to grow without limits and to do our best to realize our maximum potential.

**International Knife  
And Saw, Inc**
**G34**

**www.iksinc.com**

International Knife and Saw is a leading American manufacturer cutting tools for the tissue and towel industry. Specializing in log saw blades, blade carriers, perforation blades, cut-off knives, CBN grinding wheels, and custom lubrication systems, IKS employs cutting-edge technology. Their advanced log saw blade grinding system guarantees reduced blade usage, increased throughput, and improved cut quality. Committed to success, IKS provides thorough technical training to optimize performance.

**Jacob White  
(Packaging) Ltd**
**E72**

**info@jacobwhite.com  
jacobwhite.com**

Jacob White Packaging, manufacture some of the best Cartoning and Case Packaging machines in the world. Semi-Automatic, Automatic or High Speed Automatic, manufactured to the customer's specification, at our plant in the UK. We are able to automate the packing of both regular or cube tissue, up to 300 cpm. Our Fully Automatic case packers offer RSC, Wrap around or Tray application. Founded in 1911, Jacob White offer a wealth of knowledge and even today we have a sales and production team with over 500 years of experience. "Why do people choose Jacob White machines?" Because they work.

**Julia Utensili Srl**
**G42**

**marketing@julia.it  
www.juliautensili.com**

Julia Utensili is today one of the world's largest producers of knives for cutting tissue paper rolls, with a range of diameters from 610 to 1200 mm.

The search for the highest quality level has pushed Julia Utensili to develop an innovative product, now officially PATENTED, both in the standard 4.76 mm thickness and in the thinner 3.8 mm thickness.

User have many advantages, regarding the quality of the cut products and the productivity of the tool.

**Kemira**
**F84**
**Kemira**
**paper@kemira.com  
www.kemira.com/pulp-paper/tissue/**

Kemira combines chemistry and technology to analyze and optimize your tissue making process for strength, softness and absorbency. Our KemView™ SSA sheet structure analyzer performs an in-depth 3D analysis of the sheet, measuring characteristics, such as, crepe bars, structured fabric and embossing patterns, surface roughness, sheet pinholes and free-fiber ends. Have problems with dusting and linting in your product? Kemira's KemView™ DLM not only analyzes and measures the total amount of dust and lint particles in the tissue sheet, but also detects and measures different particles, such as, fibers, fines and starch/ash. Talk to our experts to learn more.

**Liuzhou Fexik**
**A32**

**fexik@fexik.com, zode@zode.cn  
fexik.cn, zode.cn**

FEXIK is a high-tech enterprise, integrating R&D, production sales, dedicating to whole complete automatic household tissue production line equipment raw paper to finished package, offering perfect solutions to maximize value for customers. We have been committing to research innovation for many years, have a number of national invention patents, have passed international CE, ISO9001 certificates.

Our products include toilet rolls packing machine, kitchen towel packaging machine, facial tissue packing machine, toilet paper kitchen towel production line, facial tissue hand towel production line, other household tissue paper machines, which are exported to Middle East, Asian countries, Americas, Europe, Africa.

### Luwa America Inc

A20



[www.luwa.com](http://www.luwa.com)

Balanced air engineering solutions offer optimal conditions for the most efficient operation of Non-Woven and Hygiene processes. From dust & waste collection, humidification & cooling, to fans & control engineering, Luwa has the applications you need to significantly reduce your energy consumption & provide clean air. Our fields of activity include textile air engineering, industrial air engineering, eco-engineering, & control engineering.

### Mac Due S.R.L.

D64



[macdue.it](http://macdue.it)

### Maflex Srl

C42



[info@maflex.it](mailto:info@maflex.it)  
[www.maflex.it](http://www.maflex.it)

Maflex is specialized in the production of complete lines for converting Tissue paper rolls, innovative and reliable machinery, for all companies operating in the sector. We started in 1997 and we are now able to supply complete lines for converting Tissue paper rolls, for both the Consumer and AFH markets. Our machinery has grown both from a structural integrity and reliability

### Magazines Group RNP

B90

### MAN Energy Solutions C30



MAN Energy Solutions

[info@petax.de](mailto:info@petax.de)

[www.man-es.com](http://www.man-es.com)

MAN Diesel & Turbo Schweiz AG, headquartered in Zurich, is the world's leading supplier of blowers and turbo machinery. In Zurich, MAN Energy Solutions produces both axial and centrifugal compressors, primarily for the oil, gas, and paper industries. Customers receive worldwide after-sales services under the MAN PrimeServ brand.

Products:

- TURBAIR® Blower Type RT
- TURBAIR® Blower Type RT
- TURBAIR® Vacuum Systems Specially designed for dewatering and felt conditioning for Tissue machines. The TURBAIR® blowers are available as single stage RT blowers, vacuum up to 58 kPa or as multi-stage blowers with a maximum of four different vacuum levels up to 75 kPa.

### Matthews Europe GmbH

A44



[info@saueressig.com](mailto:info@saueressig.com)

[www.saueressig.com](http://www.saueressig.com)

SAUERESSIG Group & SGK Turning ideas into customized solutions. We focus on design, technical expertise, and highest quality to deliver the outstanding results you are expecting for your tissue product. Benefit from our comprehensive approach. From state-of-the-art engraved embossing rollers up to complete embossing machinery equipment, plus flexographic printing for a color highlight each day we deliver the best possible solutions for our customer's demands.

### Maxima Tissue

D74



[info@maximatissue.com](mailto:info@maximatissue.com)

[maximatissue.com](http://maximatissue.com)

ALWAYS AT YOUR SIDE!!!

Always at your side is not only a motto for us as this short sentence tells a lot about MAXIMA. Tissue rolls have been in our DNA since our foundation and our commitment is to be specialized in tissue converting lines for rolled products. The aim is easy and challenging at the same time: to provide the most advanced technological solution to meet customers' needs in terms of line performance and new products as well. The result of this commitment is that today MAXIMA can offer a complete portfolio of technical solutions for almost any kind of tissue roll and so cover covering at 360° all the different market segments that involved in tissue rolled products. Our complete offer of converting lines is summarized into the three families of products that cover deal with from consumer to and professional rolls: COMAX our range of dedicated consumer lines, PROMAX focused on professional products and ALLMAX that gives to our Customers the possibility of producing into the same line both consumer and professional rolls.

### Maya Plastik Ambalaj

Sanayi ve Ticaret As. B75



[www.mayaplastik.com.tr/en](http://www.mayaplastik.com.tr/en)

With the high production capacity, we offer customer-oriented solutions to institutions and organizations operating in different sectors such as retail, hygiene, cargo, e-commerce, textile, food and chemical. In the Maya product range there are; cargo envelopes, cargo bags with security tapes and serial numbers, laminated products, eco-friendly products, reinforced, handheld, handled shopping bags, food packages, chicken and bread bags, cleaning products packaging, wet wipes packaging, diaper packages, detergent packages, shrink rolls, industrial products.

## Megall Paper (Qingdao) Co., Ltd. C65



[megall@megall.com.cn](mailto:megall@megall.com.cn)  
[www.megall.com.cn](http://www.megall.com.cn)

A complete range of factory direct private label tissue products, parent rolls of facial, toilet, napkin, towel, TAD and airlaid grades and finished products such as various toilet rolls, JRT, coreless & corematic toilet rolls, bulk-pack toilet tissue, box facial tissue, cocktail napkin, luncheon napkin, dinner napkin, interfold napkin, Z-fold/V-fold/C-fold/ Ultralim/Compact hand towels, centerpull roll towel, kitchen towel, lens tissue, hygiene rolls, airlaid napkin & guest towel, etc..

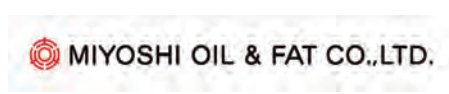
## Microline Srl E31



[info@microlinesrl.it](mailto:info@microlinesrl.it)  
[www.microlinesrl.it](http://www.microlinesrl.it)

Microline is a manufacturer of automatic end-of-line packaging machines which to respond to the needs of a whole variety of products, has devised solutions which simultaneously offer utmost versatility, safety and efficiency. The Microline's solutions— for shrink-wrappers, flow wrappers and horizontal and vertical case packers for paper rolls, paper tissues, boxes, napkins and interfolded products, connection systems and palletisers— in fact guarantee a specific answer for every type of product and need. In order to offer a complete service, Microline offers services such as: layout design, organisation of conveyor systems, assembly, maintenance, commissioning, personnel training and supply of spare parts.

## Miyoshi Oil & Fat Co. / CellMark A60



[www.miyoshi-yushi.co.jp/en](http://www.miyoshi-yushi.co.jp/en)

Benefiting people, benefiting society, benefiting the future. Miyoshi Oil & Fat Co., Ltd. was founded in 1921. Since its founding, we have contributed to the development of a healthy society through manufacturing while valuing the connection among people. In the future, we will endeavor to remain a company that is trusted by all and adheres to our corporate mission. We are the leading manufacturer of lotion for tissues in Japan. And We have started exporting them worldwide.

## Mpac Langen C76



[mpac-group.com/how-we-work/sectors/health-personal-care/tissues/](http://mpac-group.com/how-we-work/sectors/health-personal-care/tissues/)

Mpac Langen is specialized in Cartoning and Casepacking of Tissue products. Mpac provided more than 60 Tissue cartoners. The Langen MAESTRO Tissue cartoner and ALISIO casepacker create a complete line solution with the highest guaranteed efficiency available in the market.

MAESTRO and ALISIO are fully automated, flexible high-speed continuous motion machines, fully tailored to meet your exact requirements, using different speeds and infeed options, up to high speeds of 450 cartons per minute.

Integrated with upstream Tissue Interfolders, the Langen MAESTRO Tissue cartoners are designed for all kinds of Tissue clips, handling different sizes and pack styles.

Mpac Langen is represented by the company TISSUENET in the Tissue industry.

## N.C.R. Biochemical S.p.A. C74



[info@ncr-biochemical.com](mailto:info@ncr-biochemical.com)  
[www.ncr-biochemical.com](http://www.ncr-biochemical.com)

NCR Biochemical is an international chemical company specialized in water treatment, biotechnology and process additives in the paper and sugar industries.

## Nalco Water G20



[en-uk.ecolab.com/nalco-water](http://en-uk.ecolab.com/nalco-water)

A global leader in water and process management solutions, Nalco Water, an Ecolab company, is committed to helping Pulp and Paper customers meet their specific sustainability and business goals, providing water treatment products and process solutions across all grades of paper. Our solutions combine connected chemistry, digital innovation and extensive expertise to minimize water and climate impacts while maximizing outcomes at an optimized total cost.

## Narsingh Dass & Co Pvt Ltd E60



[www.theconiferous.com](http://www.theconiferous.com)

Welcome to Coniferous, where paper meets passion! Born in Mumbai, India, we're not just paper traders; we're trailblazers in delivering sustainable solutions. Crafting a future where every sheet tells a story, we export top-notch paper solutions across the USA, Middle East, Southeast Asia, Spain and beyond

## NūMove Robotics & Vision G74



[info@numovegroup.com](mailto:info@numovegroup.com)  
[numovegroup.com](http://numovegroup.com)

NūMove Robotics & Vision is a robotic system manufacturer and integrator. We develop flexible and personalized material handling solutions. Our team has been working in the field of industrial robotic automation for the past 30 years. Robotic Palletizing  
Robotic Depalletizing  
Robotic Case Packing  
Robotic Collating  
Etc.

Unlock unparalleled efficiency, stay ahead of the competition and solve labour issues with solutions tailored specifically for the dynamics of the tissue industry.



### Ocean Associate Co., Ltd.

A30



[www.ocn.com.tw](http://www.ocn.com.tw)

Established in 1981. We are manufacturers and exporters of tissue paper converting machines in Taiwan for 33 years.

We are supplying tissue converting machines as follows:

1. Facial Tissue Making Machine (Interfolder in Manual or Automatic Transfer Type), with optional point to point emboss roll and lamination unit.
2. Paper Napkin Making Machine (Napkin Folder in Vacuum or Mechanical type, single lane or multi-lane) with optional craft paper bander.
3. V-Fold and Z-Fold Hand Towel Making Machine (Manual or Automatic Transfer Type), with steel to steel emboss rolls, steel to rubber emboss rolls with lamination or not, and with craft paper bander and log saw.

We have exported more than 1000 machines to more than 30 countries, including the end-users in China, Hong Kong, South East Asia, New Zealand, Australia, South Pacific, India, Pakistan, Mid-East, Egypt, Africa, Europe, U.S.A., Canada, Caribbean, Central and South America.

### OK Science and Technology Co Ltd

A40



[www.nicepacker.com](http://www.nicepacker.com)

We are China's leading tissue paper converting and packing machines manufacturer for more than 14 years which focus on turnkey projects for V folded facial tissue, towel, handkerchief tissue, toilet paper and kitchen towel, napkin tissue, Z folded towel and has been listed on the Shenzhen Stock Exchange since 2022. Meanwhile, Our own plastic factory produce all kinds of packing material-roll plastic, bags for paper products package. With OK teams, enjoy one-stop service.

### OMC Collareda Srl

E53

[giulia@omc-collareda.com](mailto:giulia@omc-collareda.com)



[www.omc-collareda.com/en/](http://www.omc-collareda.com/en/)

Experience and structure allow not only to build specific equipment for the customer, but also to develop any engineering project in specific sectors, to perform turnkey installations in any place and carry out improvement studies of existing water cycles. OMC Collareda evaluates case by case, proposing the most suitable customized solutions in compliance with laws and the main customer's needs: recycling of raw materials, recovery of water and energy saving.

### Omet Srl

C40



[COMM@OMET.IT](mailto:COMM@OMET.IT)  
[omet.com/en](http://omet.com/en)

OMET is a leading worldwide manufacturer of a complete range of converting machines. OMET's experience in the Tissue converting industry is the result of years of market leadership and is embodied in the ability to understand customer needs and transform them into winning solutions. The product portfolio includes 9 main lines for the automatic production of paper napkins, paper towels, facial tissue and other interfolded products, placemats and non-woven products for various applications. OMET tissue converting machines combine full digital controls, ease of use and high printing capabilities. They promote time and waste savings and reliable non-stop operation. OMET is nowadays a Full Service Provider, it has developed its own range of solutions for primary and secondary packaging.

### PaperFIRST – ENP Publishing Group

D75



[www.paperfirst.info/enp-publishing](http://www.paperfirst.info/enp-publishing)

For more than 30 years, the ENP Publishing Group has been a provider of technical, business and commercial information for the pulp, paper, board and tissue industry. With the support of its editing team and correspondents based in 6 different countries, ENP publishes the PaperFIRST website, along with printed magazines, buyer guides, maps, directories and calendars, all in local language and destined to pulp producers, papermakers and converters.

### Paper & Tissue

One Show Abu Dhabi B74



[info@paperoneshow.net](mailto:info@paperoneshow.net)  
[paperoneshow.net](http://paperoneshow.net)

Paper & Tissue One Show has been adding value to the global pulp and paper industry with its international exhibitions, symposiums and B2B meetings since 2007. Over the years, the exhibition has been a constant success, attracting more and more exhibitors and visitors, eventually becoming the largest international exhibition of the world's paper industry.

More than 210 companies from 35 countries and over 16,000 visitors from 110 countries are expected to attend the upcoming exhibition, which will be held from 16 to 18 April 2024 at the Abu Dhabi National Exhibition Center (ADNEC), the largest and most prestigious exhibition center in the United Arab Emirates.

### Paper Converting Machine Company - PCMC

E10



[pcmc@pcmc.com](mailto:pcmc@pcmc.com), [sales.tissue@pcmc.com](mailto:sales.tissue@pcmc.com)  
[www.pcmc.com](http://www.pcmc.com)

Paper Converting Machine Company (PCMC), part of global equipment manufacturer Barry-Wehmiller and its BW Converting Solutions platform of five industry-leading brands, specializes in the design and manufacture of high-performance converting machinery for the tissue, nonwovens, hygiene, package-printing and bag-converting industries worldwide. Its product offerings include rewinding, laminating, printing, embossing, perforating and packaging equipment for tissue and towels; folding and converting machines; and a complete range of flexographic printing presses and laser anilox cleaners, serving the flexible-packaging, prime-label and carton-converting industries. Through its Northern Engraving brand, PCMC also provides the manufacture and engraving of embossing rolls. For more information, visit [pcmc.com](http://pcmc.com).

## Papers Unlimited Plus E63

[www.papersunlim.com](http://www.papersunlim.com)

Papers Unlimited Inc. is a second generation family run business that started operations in 1975. The business was started with the intent on helping printing and publishing companies find a way to source all of their paper needs. Papers unlimited has effectively proven a sound business model, in this specific niche, with a firm commitment to top quality products, at below market pricing, all the while maintaining a strong emphasis on quality and communication. As the years have gone by and with the industry always changing worldwide, Papers Unlimited inc has constantly evolved and adapted to global market conditions and continues to diversify our business model towards the future.

## Papertech Inc. D42



[www.papertech.ca](http://www.papertech.ca)

Papertech Inc. focuses on web-based solutions to enhance paper mills. Our TotalVision solutions improve product quality, increase efficiency, and reduce waste. We tailor solutions for various machines and production sizes. Maximize your benefits with our expert advice and training services. Since 2016, we have been a part of the IBS Paper Performance Group, expanding our global reach. Come to booth D42 to enhance your paper production efficiency with our specialized solutions.

## Papeterie Le Bourray C71



[contact@lebourray.fr](mailto:contact@lebourray.fr)  
[www.lebourray.fr](http://www.lebourray.fr)

Papeterie Le Bourray, founded in 1844, manufactures responsible high quality products with no limit of colors and assure the best performance to its customers.

## Paradigm Chemical C74



[www.paradigmchemical.com](http://www.paradigmchemical.com)

Paradigm Chemical and Consulting, LLC is a privately held, global leader in providing specialty and functional chemicals and application expertise to the pulp, paper, mining, and water treatment industries. Our corporate headquarters and primary manufacturing and distribution facility is in Acworth, Georgia USA. Our network of contract manufacturers, raw material suppliers, and strategic partnerships give us a global reach while our private ownership ensures customer intimacy and focus that is unmatched by anyone in our industry. Founded in the October, 2000 we have grown into one of the most trusted, experienced, and responsive specialty chemicals company's in business today.

## Partex Tissue Limited F76



[www.danishbd.com](http://www.danishbd.com)

Partex Tissue Limited is the newest concern of Partex Star Group under the category of Tissue paper. The factory building constructions starts back in 2018. This is the first tissue factory in Bangladesh, which is equipped with all European machines. By that people of Bangladesh will enjoy the first hygienic Jumbo Roll along with all types of consumable Tissue papers. Currently our export destination is south Korea, India, Nepal, Sri Lanka, UAE and many more.

## Perez Trading F20



**PEREZ TRADING  
COMPANY**

[info@pereztrading.com](mailto:info@pereztrading.com)  
[www.pereztrading.com](http://www.pereztrading.com)

We are an exporting and importing company for more than 75 years. We represent the leading manufacturers of paper, cardboard, machinery and supplies. We offer our clients a complete variety of the best products and solutions at the most competitive prices.

## Pinnacle Fibres Inc. E63



[info@pinnaclefibres.com](mailto:info@pinnaclefibres.com)  
[www.pinnaclefibres.com](http://www.pinnaclefibres.com)

Pinnacle Fibres Inc. is an industry leading trader of finished Paper, Pulp and Packaging. Through our vast network of customers, suppliers, and partners we have enhanced the process of matching excess roll, packaging, and pulp stock in North America to international customers in over 30 countries. Our partners benefit from our efficient supply chain management, global market expertise, strong international relationships, operational efficiencies, supplier and customer knowledge, and our strong financial support. For over 16 years, Pinnacle has been providing innovative selling solutions for the paper, pulp, and packaging industry. Pinnacle Fibres Inc. provides supply chain solutions to customers in Canada, USA, Mexico, Middle East, and Asia. Our suppliers are provided with access to international markets, spanning over 30 countries.

## Precision Roll Solutions - GB Embossing Inc. E41

**PRS PRECISION ROLL SOLUTIONS**

[branding@precisionrollsolutions.com](mailto:branding@precisionrollsolutions.com)  
[www.precisionrollsolutions.com](http://www.precisionrollsolutions.com)

Four industry-leading precision roll producers have joined forces to provide expanded capabilities; state-of-the-art manufacturing facilities in North America, extensive resources for pattern design, as well as access to the latest technology for scanning, embossing, and replicating existing embossing roll patterns. Your next roll project will benefit from the insight of experience.

## Proflow Inc G22



[sales@proflow-inc.com](mailto:sales@proflow-inc.com)  
[www.proflow-inc.com](http://www.proflow-inc.com)

ProFlow Inc. is a leading supplier of chemical process skids for industry. ProFlow's modular fluid processing systems are present in the majority of paper and tissue mills in North America, and are operating in more than 30 countries worldwide. Design, fabrication, and commissioning services.

### Promotech Srl

F44



[info@promotechsrl.it](mailto:info@promotechsrl.it)  
[www.promotechsrl.it](http://www.promotechsrl.it)

Promotech is a leading distributor of electric and electronic equipment for industrial automation, offering a comprehensive range of products to meet the specific needs of companies both domestically and internationally. Our extensive knowledge of the automation industry, coupled with our commitment to compliance and quality, allows us to provide certified products that satisfy a wide range of requirements.

### Pulsar Engineering Srl C21



[info@pulsarengineering.com](mailto:info@pulsarengineering.com)  
[www.pulsarengineering.com](http://www.pulsarengineering.com)

With more than 35 years of experience in tissue, Pulsar Engineering provides a wide range of services and products from the engineering and optimization of layouts to preventive analysis of the operation of the lines, from quality control systems to highly flexible primary and secondary packaging solution based on robotized systems. The company has installed numerous turnkey plants for the main tissue producers worldwide and is able to provide solutions to upgrade existing plants and to design entire production lines. In 2013 Pulsar formed Pulsar America Inc. in Green Bay (WI) to better collaborate with North American customers.

### Ronco Machine, Inc. G40



[Sales@roncomachine.com](mailto:Sales@roncomachine.com)  
[www.roncomachine.com](http://www.roncomachine.com)

Ronco Machine, Inc. (RMI) is a full-service manufacturer of custom converting equipment. RMI branded products have been in production for over 40 years and are recognized worldwide for reliable performance and durability. From custom designs to complete machinery line rebuilds, RMI's experienced staff stands ready to provide customers with practical solutions and friendly technical advice. In addition to building new equipment such as core winders and ancillary converting machinery, we refurbish and broker used equipment, procure parts and continually develop new products to meet the ever-changing needs of our customers.

### S.T. Machine Spa

G30



[info@stmaschine.it](mailto:info@stmaschine.it)  
[www.stmaschine.it](http://www.stmaschine.it)

ST Machine is an international leader in the paper industry focused on the design and production of the following machinery and equipment:

Pressurized and hydraulic headboxes. Fourdriniers.

Systems for complete stock preparation. Water Treatment Systems in the paper mill, industry and municipality.

Stock chest, whitening towers, vats and mixers.

Structural (medium-heavy) items in sub-contractor role for the paper industry for the major manufacturers of tissue and other related machines for linerboards, fine paper, coated paper and cardboard.

Machinery for synthetic and carbon fibres.

Pipes, couplings, flanges and valves for pulp, compressed air and water loops.

ST Machine is continuously focusing on improving its technologies and looking for new markets to install them in order to keep and improve its leading international position in the supply of equipment for paper industry and water treatment.

### Saigon Paper Corporation

E82



Saigon Paper

[contact@saigonpaper.com](mailto:contact@saigonpaper.com)  
[www.saigonpaper.com/en](http://www.saigonpaper.com/en)

Established in 1997, Saigon Paper is proud to be the leading company in manufacturing tissue paper and industrial paper in Vietnam. We bring to both domestic and international market the tissue products including napkin paper, facial tissue, pocket tissue, kitchen towels, medical towels and toilet paper with the best quality under brand name Bless You, Saigon. In addition, our industrial paper products such as including medium, testliner, chipboard, duplex serving cardboard packing production are also favored and trusted by partners.

### SDF Schnitt-Druck Falz-Spezialmaschinen GmbH

D63



[info@s-d-f.de](mailto:info@s-d-f.de)  
[www.s-d-f.de](http://www.s-d-f.de)

SDF GmbH is a worldwide leading manufacturer of high-quality tissue converting machinery from Germany and has gained an excellent reputation for airlaid and nonwoven converting equipment. High-speed napkin folders with and without printing. The next generation of the world's first digital napkin printing machine for advertising and personalized napkins and high quality napkins for small orders. Folders for nonwoven wipes, Rotary cross-cutters for place mats and Reel to Reel printing machines.

### Sellars Nonwovens

G84



[www.sellarsnonwovens.com](http://www.sellarsnonwovens.com)

We are a leading Nonwoven manufacturer of shop towels, premium napkins, wash cloths, premium guest towels, wet wipes, kitchen towel roll towels, disposable bath towels, disposable tablecloths, and food service wipes. Sellars substrates can be found in the Home, AFH, Medical, and Food Service markets.

### Senning GmbH

G82



[info@senning.de](mailto:info@senning.de)  
[www.senning.de](http://www.senning.de)

Senning GmbH, located in Bremen, Germany, designs and manufactures highly efficient folding and packaging systems for the tissue and hygiene industry. With more than 70 years of engineering experience, we provide innovative solutions ranging from modular standard machines to tailor-made solutions for the customers' specific needs. Senning is a technology leader in the field from the single wrapper to turnkey production lines for packaging products such as handkerchiefs, napkins, hand towels



**Servipap LLC**
**F34**


[info@servipap.com](mailto:info@servipap.com)  
[servipap.com](http://servipap.com)

Servipap and its team specialize in serving the tissue paper converting industry with an on-going combination of high-performance machines and services for converting companies. We are constantly providing efficient and cost-effective solutions for our customers across North America, Latin America and the Caribbean. Servipap y su equipo de trabajo se especializan en servir a la industria de conversión de papel con una combinación de máquinas y servicios de alto rendimiento para convertidores.

**SGS-IPS Testing**
**C91**


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We are the world's leading testing, inspection and certification company.

**SharpCell Oy**
**E70**


[www.sharpcell.fi](http://www.sharpcell.fi)

We are a family-owned company based in Finland manufacturing airlaid nonwoven paper. Our paper is widely used in tabletop, healthcare, hygiene and wiping applications. We use sustainable wood fibers mainly from Scandinavia, always FSC certified. Need airlaid nonwoven material that is compostable, approved for food contact and dermatologically 'Excellent'™? We have a solution for you.

**Sofidel America**
**F81**


[www.sofidel.com](http://www.sofidel.com)

The Sofidel Group is one of the leading manufacturers of paper for hygienic and domestic use worldwide. Established in 1966, the Group has subsidiaries in 12 countries between Europe and the USA – with more than 6,000 employees, net sales of 2,173 million (2020) and a production capacity of over one million tons per year (1,428,000 tons in 2020). Sofidel's presence in the United States can be found through its brands Nicky and Papernet. The Sofidel Group considers sustainability a strategic factor with regards to growth and is committed to reducing its impact on natural capital and maximizing social benefits.

**Solenis LLC**
**F60**


[www.solenis.com](http://www.solenis.com)

Solenis is a leading global producer of specialty chemicals focused on delivering sustainable solutions for water-intensive industries, including the pulp industry. The company's product portfolio includes a broad array of water treatment chemistries, process aids and functional additives, as well as state-of-the-art monitoring and control systems.

**Spacevac Incorporated**
**B72**


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The World's #1 High-Level Cleaning System.

**SPS Corporate**
**G50**


[www.sunpapersource.com](http://www.sunpapersource.com)

SPS CORPORATE [PT Sun Paper Source & PT Sopanusa Tissue & PackaSPS CORPORATE [PT Sun Paper Source & PT Sopanusa Tissue & Packaging Saranasukses] is a leading tissue paper producer in Indonesia, which is located in Mojokerto, East Java. It produces over 150,000 tonnes of tissue paper per year. We are the second biggest tissue paper producer in South East Asia. As of today, the company exports the majority of its production capacity, serving customers in more than 70 countries around the world.

**Star Paper Mill Paper Industry LLC**
**E64**


[www.starpapermill.com](http://www.starpapermill.com)

Star Paper Mill is located in the growing Industrial City of Abu Dhabi (ICAD). The machine deckle is 3.6 m having two rewinders with a capability of rewinding up to 4 ply. The annual production is around 36,000 metric tonnes of world class prime quality virgin tissue paper. SPM produces a wide spectrum of hygienic tissue paper in various grades ranging from the most delicate 12.5 gsm to 42 viz. Facial; Toilet; Napkin; Kitchen Towel; Maxi, Centerfeed; Auto-cut; Industrial Rolls; Hand Towel.

### Stax Technologies

E10



[marketing@staxtechnologies.com](mailto:marketing@staxtechnologies.com)  
[sales@staxtechnologies.com](mailto:sales@staxtechnologies.com)  
[www.staxtechnologies.com](http://www.staxtechnologies.com)

STAX Technologies company was founded in Cacak, Serbia, in 2002. Since then, it has been constantly moving forward. Core business of our company consists of development and production of packaging machines in tissue industry. The company successfully delivers and installs the equipment from its wide portfolio in more than 70 countries on 5 continents. Our production portfolio consists of complete packaging systems for hygienic paper, including wrappers, bundlers, case packers, as well as palletizing and pallet stretching systems. Almost three years ago STAX has become member of great Barry Wehmiller family. We are proud to be one of the five companies which is the part of BW Converting Solutions Platform. Together, we are able to provide full turnkey solutions in tissue production industry.

### Streco Fibres Inc.

F80



[streco.com](http://streco.com)

Streco Fibres helps many paper product manufacturers worldwide to achieve a sustainable competitive advantage by taking on an active role in supply chain management. Customers enjoy value-added services such as sourcing, financing, and logistics so they have more time running day-to-day business operations and serving their customers. Streco collaborates closely with paper mills globally promoting their products to untapped markets and fulfilling sourcing needs of existing customers. Streco's strong financial strength and excellent credit rating help suppliers reduce excess capacity by buying in bulk quantities. The portfolio includes parent rolls of industrial paper, specialty papers, tissue, toweling, and board grades.

### Suzano Pulp and Paper America, INC

E80



[llombard@suzanoamerica.com](mailto:llombard@suzanoamerica.com)  
[www.suzano.com.br](http://www.suzano.com.br)

Suzano is the world's largest producer of hardwood pulp and the global leader in the innovation and production of renewable, bio-based materials for consumer and industrial use. Our responsibly-grown materials provide over 2 billion people in more than 100 countries with plastic free products including writing paper, tissue, paper cups and straws, paperboard packaging, toilet paper, textiles, diapers and more. We are pioneers in sustainable mass scale industrial production, and our ethos of innovability – the pursuit of sustainable solutions through innovation – is at the core of all our work, from the field to our factories and labs, all the way to the end user. Suzano's history spans 100 years and is listed on the B3 stock exchange in Brazil (SUZB3) and the NYSE (SUZ) in the United States.

### TAPPI Tissue360 Magazine

C90



[tappi.org](http://tappi.org)

TAPPI fosters the vitality of the global forest products, pulp, paper, tissue, packaging, and associated industries by delivering unsurpassed technical knowledge, valuable networks, and professional growth for our members.

### TDL Hygiene Co., Ltd

E81



[info@tdlhygiene.com](mailto:info@tdlhygiene.com)  
[www.tdlhygiene.com](http://www.tdlhygiene.com)

TDL HYGIENE was established in Shenzhen, China since 2010, as a professional manufacturer & wholesale supplier of dispenser and cleaning products. We offered various packing solution for different clients. Our mainly products including:  
 Soap Dispenser  
 Hand Soap Refill Bags  
 Toilet Paper Towel Dispenser  
 Air Freshener Dispenser  
 Hand Dryer  
 Hair Dryer  
 Dustbin

### The Kinetic Co.

B85



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[knifemaker.com/](http://knifemaker.com/)

Proudly known as the World's Premier Knifemaker. We continue to invest in new technology yet combine this with years of engineering and craftsmanship experience.

### Tietoevry Finland Oy

G44



[www.tietoevry.com/tipstissue](http://www.tietoevry.com/tipstissue)

Tietoevry is your trusted industry digitalization partner. Our TIPS Industry Solutions and Services is the leading industry-specific MES/ERP, already installed over 300 locations worldwide. It's optimized for pulp, paper, fibre, board, packaging and tissue customers with industry best practices. Tietoevry has 24,000 experts specializing in digitalization having customers in more than 90 countries.

### Tissue Tec Sales & Service GmbH

F34



[info@tissue-tec.de](mailto:info@tissue-tec.de)  
[www.tissue-tec.de](http://www.tissue-tec.de)

TISSUE TEC GmbH and SERVIPAP LLC are your experienced and reliable partners for selling your surplus tissue converting equipment, or your perfectly networked source if you are looking for pre-owned tissue converting machinery. We are specialized in the following equipment:  
 toilet and kitchen roll rewinders and wrappers  
 industrial roll rewinders and wrappers  
 napkin folders and wrappers  
 pocket handkerchiefs lines  
 handtowel folders and wrappers  
 facial tissue machines and wrappers

## TKM United States

G62



[paper@tkmgroup.com](mailto:paper@tkmgroup.com)  
[www.tkmgroup.com/en/tissue-converting-industry](http://www.tkmgroup.com/en/tissue-converting-industry)

For more than 100 years, the TKM Group as a family business, stands for quality and sustainability in products and services. As the world market leader of Industrial knives for the tissue converting industry & Logsaws, it is our ambition to develop highly efficient tools and solutions with innovative ideas and advanced technology, all while setting sustainable trends.

## Tongxiang Jianfan Technology Co.,Ltd

D90



[www.disposable-diaper.com](http://www.disposable-diaper.com)

JIANFANKEJI, China manufacturer of adult diapers, adult cloth diapers, incontroll diapers, adult pull ups, baby diapers, newborn diapers, disposable towels.

## Toscana Spazzole Industriali Srl

E84



[info@toscanaspazzole.it](mailto:info@toscanaspazzole.it)  
[www.toscanaspazzole.it](http://www.toscanaspazzole.it)

Toscana Spazzole Industriali is a producer of brushes-based systems which are directly involved in quality of products and processes. It is an important partner in many industrial fields (Textile, Glass, Plastic, Paper Industry). In Paper Industry, TSI supplies Spreader rollers for Rewinder and Embossing Units and Lubricating/Cleaning Systems for Embossing Units.

## Trebor, Inc.

B60



[www.trebor.com](http://www.trebor.com)

Trebor is the world's largest independent marketer of parent rolls of tissue, towel, napkin and wiper stock. Since its founding in 1972, Trebor has gained the reputation for being a reliable source of supply and for rapidly responding to its customers' needs. Trebor supplies tonnage to converters and paper mills in virtually any volume. Experienced sales staff, strong financial foundation and operational strength allow Trebor to tailor supply strategies to your converting and production requirements.

## UNIMATEC Praegesysteme GmbH D62



[info@unimatec.com](mailto:info@unimatec.com)  
[www.unimatec.com](http://www.unimatec.com)

For more than 30 years, UNIMATEC has been a strong and reliable partner as to the design, manufacturing and commissioning of embossing machines and embossing rollers for the metalworking and the tissue and foil industry alike. Thanks to a widespread range of available machine types, the variety of applications of our embossing systems is almost unlimited. UNIMATEC systems are for example used in the production of heat shields, shingles, walls made of sandwich elements, garage doors and various further industrial applications. The product portfolio comprises embossing systems with a working width up to 4,800 mm and a diameter up to 600 mm. Our in-house laboratory facility enables us to develop and test customized embossing processes in manifold variations for our customers.

## United Converting Tissue Srl

A10



[www.uctissue.com](http://www.uctissue.com)

Our venture began in 2004 with the aim of designing and building machines and accessories that would simplify the tissue converting industry through innovation. We offer solutions for the converting of Industrial roll, Consumer rolls and interfolded products as well as single modules and efficient customer care.

## Universal Tissue Machine Co. Ltd

F77



[www.universalmachine.com.tw](http://www.universalmachine.com.tw)

Based in Taiwan Universal Machine Co started over 10 years old offering to the market high tech solutions in Tissue conversion lines.

Our main machines focus are Interfolder, table transfer automation, rewinders, wrapper machines, high speed log saw, etc. We usually focus on our client necessities to making our machine specially design and adjustment to achieve every client desires. If your company are looking for high tech, with excellent building quality and mainly a good price, we have the solutions promptly to make your business grow faster. Don't hesitate to contact us at H65 booth.

## Valmet

F50



[www.valmet.com/tissue](http://www.valmet.com/tissue)

Valmet has created the market's widest offering for the tissue industry. Through the acquisition of Korber's Business Area Tissue, we offer technologies, services and automation for the entire tissue value chain from fiber to the finished end product. Our flexible tissue making technology provides sustainable production of all types of grades from plain to textured and structured tissue products with high quality.

## Valmet Tissue Converting S.p.A.

D20



[koerber.com](http://koerber.com)

Valmet has created the market's widest offering for the tissue industry. Through the acquisition of Korber's Business Area Tissue, we offer technologies, services and automation for the entire tissue value chain from fiber to the finished end product. Our flexible tissue making technology provides sustainable production of all types of grades from plain to textured and structured tissue products with high quality.



### Weifang Lancel Hygiene Products Co.,Ltd C72



[lancelpaper.en.made-in-china.com](http://lancelpaper.en.made-in-china.com)

One of the largest suppliers, manufacturer, Processors of good quality of Jumbo Roll paper in China. Top Brand of superior quality Carrier Tissue and Towel Paper in China. Established in 1946, Weifang Lancel Hygiene Products LTD, was the first generation of high quality tissue paper supplier, was the earliest introduction of world leading Kavanoe BF-10(Japan) in China. Lancel is the member enterprise of CNHPA, with the annual production capacity of 60,000 ton.

### Weko North America, Inc. B70



[www.weko.net/en](http://www.weko.net/en)

### Winkler+Dünnebier GmbH E10



[sales.hygiene@w-d.de](mailto:sales.hygiene@w-d.de)  
[www.w-d.de](http://www.w-d.de)

As the world's leading technology, systems solutions and service partner, Winkler+Dünnebier (W+D), founded in 1913, offers a broad range of highly efficient integrated manufacturing equipment for the envelope, mail, tissue and hygiene industries. W+D's core competencies are the processing and handling of thin and inhomogeneous materials, such as paper, tissue and non-woven, at high speeds and with tight tolerances. With its innovative and tailor-made system solutions and services, W+D focuses on the entire internal value creation chain of its customers. Today, W+D operates in the Mail Solutions and Hygiene Solutions business units and it is part of global equipment manufacturer Barry-Wehmiller and its BW Converting Solutions platform of five industry-leading brands. The Hygiene Solutions division stands for system solutions for the manufacture and packaging of tissue folding and hygiene products.

### Zhejiang Jiecheng New Material Co., Ltd. A50



[account@jc-nonwoven.com](mailto:account@jc-nonwoven.com)  
[www.jc-nonwoven.com.cn/](http://www.jc-nonwoven.com.cn/)

The company owns three production lines which are specialised in nonwoven manufactures. Engaged in non-woven industry for more than 20 years. Also, there are professional R&D teams working on all kinds of cleaning materials, daily wiping materials, and facial mask materials. By sticking to the principle- customers first, the company has established a comprehensive quality management system in order to guarantee the stability of quality and service. In the development situation of its own non-woven production line, in order to better serve customers and provide customers with a more perfect supply chain, the company has developed the business of non-woven finished products factory, from the research and development of non-woven fabric to the subsequent production of finished products, to provide customers with integrated supply services.

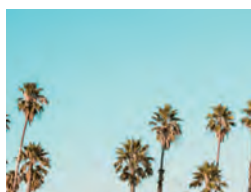
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**Tissue World** | Düsseldorf  
8-10 April 2025



**Tissue World** | Miami  
25-27 February 2026

# UNVEILING THE FUTURE: THE HYGIENE TISSUE INDUSTRY IN THE NEXT DECADE

To encourage consumers to choose sustainable products at a premium price, tissue companies must prioritise improving product performance and providing well-defined sustainability metrics and information. Report for TWM by North Carolina State University's Keren A. Vivas, Ramon E. Vera, Naycari Forfora, Ronalds Gonzalez, and Georgetown University's Sudipta Dasmohapatra.



If you haven't visited the hygiene tissue product aisle of a supermarket recently, we recommend doing so. You'll notice that the offerings are evolving, being notable in products featuring new colours, messages, and various types of fibres (wood, recycled, and non-wood). Interestingly, most of those features aim at promoting sustainability. This transformation is just the beginning; the hygiene tissue industry is preparing to embark on one of its most challenging journeys. Some products may remain unaffected, while others will require complete reinvention. To navigate and embrace these changes successfully, it's crucial to stay attuned to global megatrends.

In the face of new challenges, researchers from the Tissue Pack Innovation Lab at North Carolina State University undertook an extensive analysis to identify key global megatrends shaping the hygiene tissue industry. Their objective was to grasp the industry's evolving landscape, predict its future, and explore potential strategies to adapt to disruptions. Through their research, these researchers identified digitalisation, shifts in social behaviour, and

sustainability as the primary global mega-forces propelling transformative changes.

One disruptive situation is related to the shift from using printing and writing paper to going paperless, which is part of the broader trend of digitalisation. This is having a significant impact on the global tissue paper industry relying on recycled fibres. Only in the United States one-third of hygiene tissue is made from recovered paper (such as recycled printing and writing paper). Digitalisation is leading to a substantial reduction in the production of these traditionally used recycled fibres, resulting in a shortage of these essential raw materials.

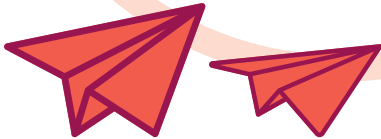
Between 2000 and 2018, printing and writing paper production in the US decreased by half, from approximately 30m tons to 15m tons (Figure 1). Covid-19 further accelerated this trend, reducing an additional 5m tons within two years. It resulted in several facilities transitioning from producing printing and writing paper to manufacturing paperboard for boxes.

Correspondingly, the future availability of recycled fibres is expected to face further disruptions. To predict future trends, a forecast for the period from 2022 to 2032 was created. This forecast is based on

factors like compound growth rates from different time frames, such as 2010-2020 (CAGR-10y), 2015-2020 (CAGR-5y), and 2017-2020 (CAGR-3y) (see Figure 1). These projections help to understand how digitisation will impact the availability of recycled printing and writing paper by 2032. These estimations suggest that over the next decade, production and availability of printing and writing paper may decrease by 50-75% compared to 2020 levels. This will lead to increased costs and lower quality materials in certain areas. In light of this analysis, it's crucial to urgently explore alternative options for replacing recycled printing and writing paper. Potential solutions include alternative non-wood fibres or finding different sources for recycled paper fibre.

Digitalisation is also reshaping consumer behaviour, particularly in the realm of shopping, with online transactions experiencing significant growth, a trend that has been ongoing for years and accelerated by the Covid-19 pandemic. The shift towards online shopping, along with the conversion of multiple printing and writing paper facilities to produce containerboard and an increased focus on eco-friendly paper-based packaging, has resulted in a substantial increase in secondary packaging production.

**These estimations suggest that over the next decade, production and availability of printing and writing paper may decrease by 50-75% compared to 2020 levels.**



From 2008 to 2022, containerboard production has grown by 32% or approximately 6m tons (Figure 2). Forecasts for 2023-2032 (based on various periods of CAGRs) predict an ongoing capacity expansion of 15-30% by 2032. Old Corrugated

Production of printing and writing papers in US and Canada across years

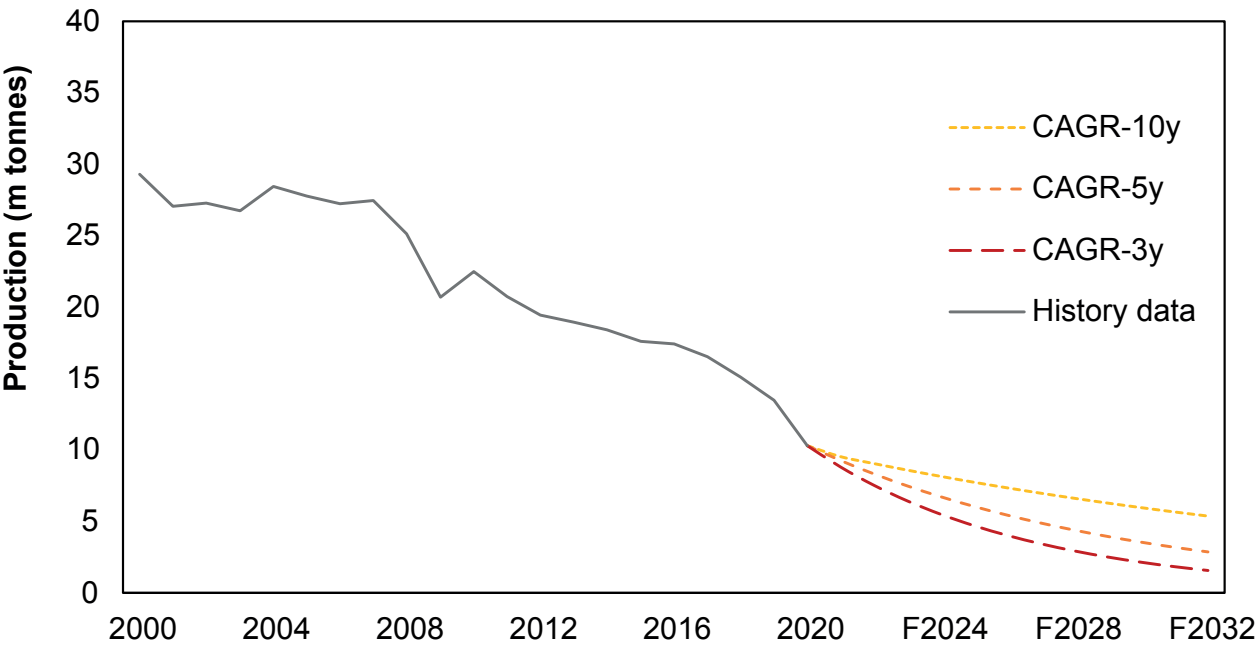


Figure 1: Production of printing and writing papers in the United States and Canada across years (FAOSTAT, 2023).





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Capacity of containerboard in US across years

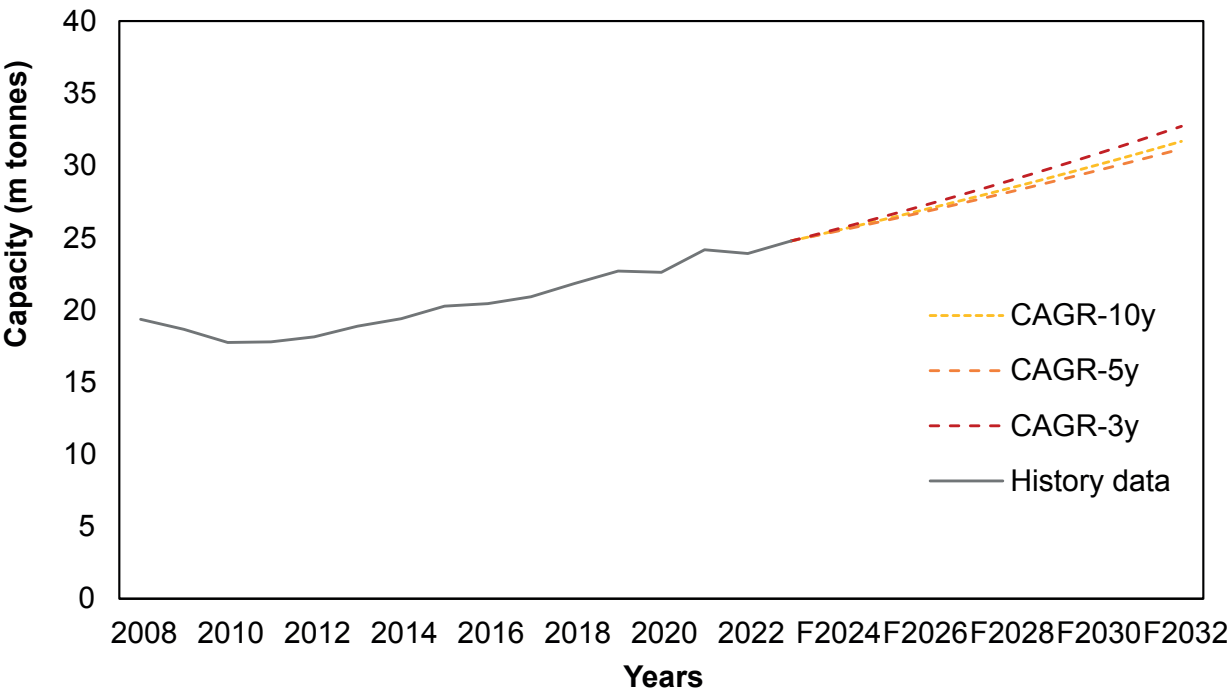


Figure 2: The capacity of containerboard in US across the years (Fisher International, 2023).

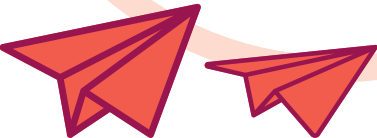
Containers (OCC), sourced from industrial and consumer packaging, are being considered as a potential replacement for recycled paper in hygiene tissue production due to their high production volume and recyclability. However, challenges arise from the brown colour and reduced softness of

fibres found in OCC. In response to the colour challenge, some hygiene tissue companies are introducing products featuring natural colour fibres, such as mocha. Nevertheless, consumer preference for white tissue products remains high. This necessitates the exploration of environmentally friendly bleaching processes aligned with the sustainability megatrend.

One significant and rapidly evolving trend reshaping social behaviour is the increasing environmental consciousness and the heightened concerns surrounding climate change. This behaviour shift has prompted individuals to leverage their purchasing power to address societal issues and minimise their environmental footprint.

These shifts in consumer behaviour are observable across all generations, united by a shared environmental awareness. However, each generation exhibits unique priorities, behaviours, preferences, and spending habits. In the United States, as of 2022 the proportion of older and younger generations is nearly balanced. Nonetheless, demographic projections indicate a forthcoming transformation, with younger generations expected to constitute 64% of the population by 2030. Given this substantial change in generational composition and the influence of global megatrends, it is essential to examine consumer behaviours and perceptions of sustainability across generational groups.

One significant and rapidly evolving trend reshaping social behaviour is the increasing environmental consciousness and the heightened concerns surrounding climate change.





Older generations tend to display strong brand loyalty and a preference for traditional in-person shopping experiences. They value personal interactions and the ability to physically interact with products before making a purchase. Conversely, younger generations gravitate toward digital technologies for product research, price comparisons, and purchases. They prioritise convenience, accessibility, and a diverse online product range at competitive prices. When making purchasing decisions, they heavily rely on recommendations from friends, influencers, and online reviews. They also want more value for their money, which explains the rise of private labels.

Despite variations in the perception of sustainability among generational groups, defining sustainability remains a challenging task. The concept of sustainability with hygiene tissue market experts was explored by developing a Delphi study (this technique is a systematic process of forecasting using the collective opinion of panel members). The findings underscore the intricate nature of defining sustainability, which can be seen as either an ambiguous 'trend similar to climate change' or as a precise metric, such as comparing carbon footprints between products.

Sustainability presents challenges to the manufacturing of products while also opening opportunities for differentiation and additional revenues, as some consumers are willing to pay a

premium for environmentally responsible products and services. Hygiene tissue companies have been progressively incorporating sustainable options into their product portfolios. The Tissue Pack Innovation Lab at NC State University has tracked the offering of self-labelled sustainable hygiene products in the US from 2017 to 2022, noting a 30% increase in bath tissue and a 25% increase in kitchen towel during this period. The category of self-labelled sustainable hygiene tissue products encompasses products displaying various sustainability attributes, including the use of alternative fibres, recycled fibres, or responsibly sourced fibres from managed forests. Moreover, features like recyclability of the product packaging and eco-friendly manufacturing processes are highly utilised.

To examine the past and current perspectives on sustainability within the hygiene tissue industry, an LDA topic modelling was conducted on sustainability reports from the top sixteen hygiene tissue companies in the US (2012-2021). Insights from the topic modelling and relevant literature review suggests that the current sustainability landscape in the hygiene tissue industry can be outlined through these aspects:

- Responsible forest management and certification
- Recycled fibres
- Alternative fibres
- Environmentally friendly production processes
- After-use disposal implications
- Social aspect

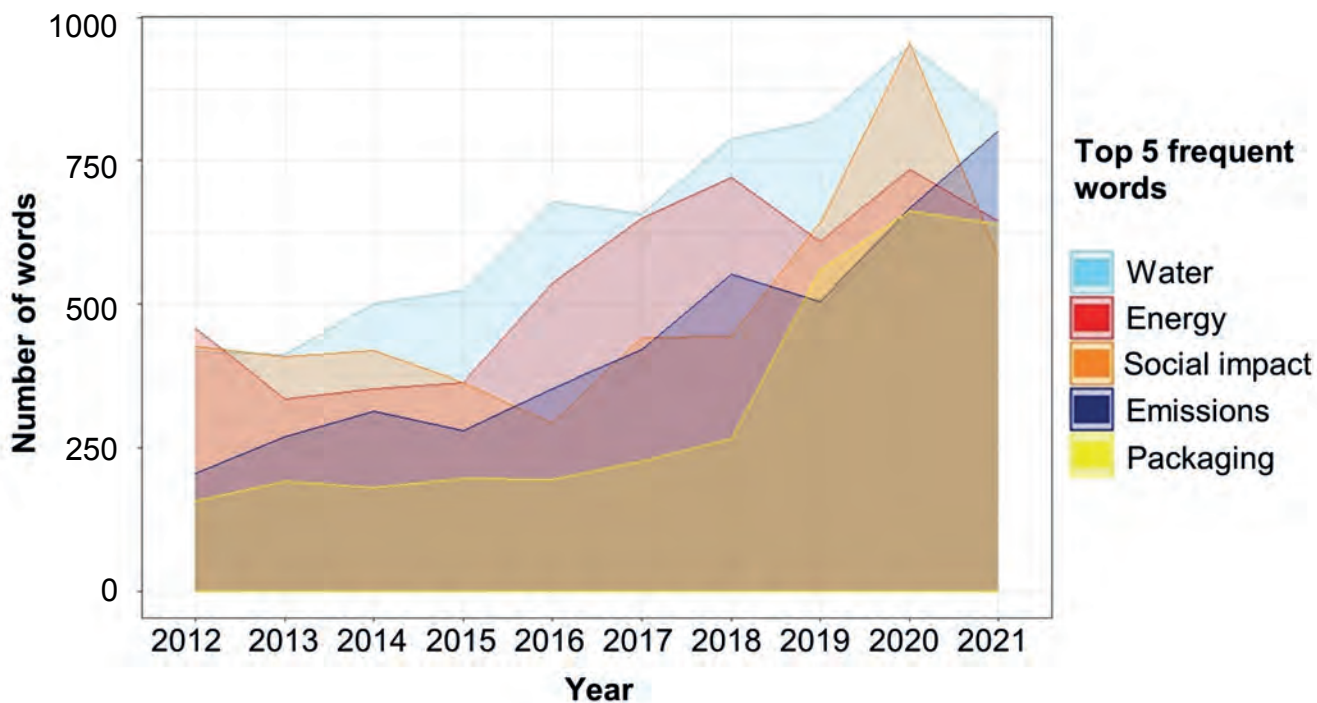


Figure 3: Distribution of the top five sustainability-related words over the years.



In the Delphi study, which sought insights from experts in marketing hygiene tissue products, several barriers hindering the adoption of sustainable hygiene tissue products were identified. These obstacles encompass premium pricing, insufficient information about sustainability and certifications, brand loyalty, lack of consumer confidence, and a perceived low performance. The barriers were ranked in terms of how impactful they are to make consumers hesitate to buy sustainable options when purchasing hygiene tissue products. The ranking indicates an equal impact from premium pricing and insufficient information about sustainability. This may suggest that once a sustainable product is recognized, the price may not be a significant barrier. While consumers may assume a positive correlation between premium price and superior performance, research challenges this assumption. A particular example exists for kitchen towels, where higher prices do not necessarily guarantee better water absorbency. Furthermore, experts unanimously expressed the view that one of the key sustainability-related attributes for the next decade will be product performance. To encourage consumers to choose sustainable products at a premium price, tissue companies must prioritise improving product performance and providing well-defined sustainability metrics and information.

Examining the frequency of sustainability-related words mentioned in sustainability reports over the years (Figure 3), a noticeable upward trend is evident, especially concerning carbon emissions reduction, packaging materials, and after-use implications. Providing transparent and reliable sustainability information enables companies to

address consumer hesitations, including concerns related to insufficient information or fear of greenwashing, thereby promoting the adoption of sustainable hygiene tissue products.

### CONCLUDING REMARKS:

- Digitalisation megatrend will continue triggering a shortage in the supply of recycled writing and printing paper with additional drop between 50-75% (with respect to 2020), which will force the penetration of other recycled fibres like OCC and alternative fibres (e.g. wheat straw).
- Using brownish fibres from OCC enhances environmental appeal for sustainability-oriented consumers, but developing low-carbon footprint bleaching processes is crucial for diverse consumer preferences.
- To meet the sustainability demands of the younger generation, hygiene tissue companies must provide clear metrics and data on raw materials and packaging implications.
- Providing hard data about sustainability (carbon footprint) will enable consumers to confidently identify, compare, and adopt sustainable hygiene tissue products.
- Companies are shifting towards key indicators like "emissions" in sustainability reports and packaging. In the future, companies are expected to list carbon footprint data, instilling greater confidence in consumers.

#### **This article was written for TWM by:**

North Carolina State University's Keren A. Vivas, Ramon E. Vera, Naycari Forfora (Research Assistants and PhD students at the Department of Forest Biomaterials); Ronalds Gonzalez, PhD (Associate Professor, Consultant & Thought Leader in Sustainable Fibre-Based Consumer Goods at the Department of Forest Biomaterials); and Georgetown University McDonough School of Business's Sudipta Dasmohapatra, PhD (Senior Associate Dean of MBA Programmes | Professor of the Practice in Business Analytics and Marketing).

**Once a sustainable product is recognised, the price may not be a significant barrier.**

**Name of the scientific article** Predicting the Impact of Global Megatrends on the Hygiene Tissue Industry in the Next Ten Years: An Analytical Study Utilising Delphi Study and Topic Modelling.

Websites: SAFI consortium (<https://research.cnr.ncsu.edu/safi/safi-consortium/>), Tissue Pack Innovation Lab (<https://research.cnr.ncsu.edu/tissuelab/>) both at North Carolina State University.

# 2024 IS A YEAR OF ELECTION CAMPAIGNING – IT WILL BE A MILESTONE FOR POWER STRUCTURES AND GLOBAL TRADE PATHWAYS



Even if more stability prevails, the bill will come due on the post-pandemic recover, the social costs of warfare, and society's green transition and digitisation. Dr. Antonia Colibășanu, Senior Geopolitical Analyst with Geopolitical Futures, Co-Founder & Principal at Allonia Group and Senior Fellow in the Eurasia Programme at Foreign Policy Research Institute, reports for TWM on how companies should prepare.

**F**or most of us in international business, the year of 2023 was better than expected. This is because most forecasts for 2023 were pessimistic, considering the year of 2022 was both the first post-pandemic year and the year when Russia started the war in Ukraine. It was clear that a global restructuring process was under way, one that was affecting mostly the world economy. We have not entered global economic depression as some were announcing, and we are still debating whether we have entered recession.

Therefore, if 2022 was the year we entered the global economic war, the year of 2023 was the year we adapted to it. In this sense, 2024 will be defined by the first steps in the resolution of the current global economic war.

## From restructuring to re-settling

The restructuring economic processes that began before 2020 and were accelerated since are slowly

coming to an end/conclusion in 2024. Even if military conflicts are likely to continue (beyond Ukraine and most recently Gaza), the global economy is already changing and the flows of trade and investment are likely to stabilise during 2024, at least in what regards their direction and dynamics. In other words, we are beginning to understand the most important components of the post-war global economy. There are two factors shaping them out:

### 1) THE RECONSTRUCTION PLANS FOR UKRAINE

This is a key factor because it is dependent on the war scenarios for Ukraine and generally, the balance of power between Russia and the West.

While wars always end in negotiations, the potential for such negotiations to happen sooner rather than later is limited. Politically, both the US and Europe will go through election seasons in 2024. The US and Russia will both have presidential elections in November and March 2024 respectively. Europe will have EU Parliament election season and several other national-level elections. Ukraine will

also witness presidential elections at the end of March next year.

Politics are influenced by socioeconomic stability; the more economic problems a country's people have, the less likely the government will be re-elected. Therefore, while geopolitics doesn't explain politics, it must look into social problems to understand the political environment and if major changes are likely to come.

Perhaps the big question mark on political stability refers to Russia. A potential change in government would significantly affect the way the war in Ukraine is conducted. However, change in Moscow is very unlikely. Economically, Moscow focuses on growing its autonomy and resilience by building new routes that allow it to avoid the West and its sanctions.

Meanwhile, the West is still coping with the negative effects of both the pandemic and the war and focuses on keeping its socio-economic stability. In the US, it is hard to predict the election results, but the growing social polarisation makes the political environment tense for 2024 with few decisive changes concerning Ukraine and the global economic war that started in 2022.

Both in the US and Europe, the economy is going through systemic changes that have to do with both post-pandemic priorities and a switch to match Russia's shift to the war economy. The West has only begun to increase military spending in 2023, on top of having to keep subsidies up for covering the social costs associated with the war and the pandemic. Continuing to do so while also sustaining the green transition and digitization will increase the cost and get developed Western countries into a world of high-interest rates and potentially high taxes. This may not be visible during the first half of 2024 due to election campaigns, but will increasingly become obvious towards the end of the next year, especially if the kinetic warfare in Ukraine continues (at least in the Eastern and potentially Southern provinces, as is expected).

All of this creates a climate in which investment in rebuilding Ukraine becomes prohibitively expensive if we only consider financial markets. Government money is not just needed – it is a must. Companies would welcome access to government finance, which should be less expensive than lending from the banking sector given the current high interest rate environment. Not to mention businesses trust on government backing whenever they seek de-risking their investments. However, due to the election season in 2024, spending decisions will be carefully considered and likely delayed in most developed countries, especially in the US. This doesn't mean that the reconstruction project stops. It does mean, however, that most of it will refer to continuing building up Ukrainian military resilience (defense-related funds).

However, the Ukrainian economy is almost completely dependent on Western help – even for exporting its goods, Kyiv needs the West to facilitate its trade routes through Europe and secure whatever shipments are sent through the Black Sea. With an attrition war continuing into 2024 and beyond, internal election results will likely be decided by the society's war fatigue. At the same time, considering reports about corrupt practices within the current regime – and the population's dissatisfaction with it, it is likely that the political campaigning season is a milestone for both Western and Russian influence in the country. If the West doesn't secure a political candidate for Kyiv, Russia will likely grow its influence in the country, something that will not only make the reconstruction project difficult (and likely limited at managing the Western frontier) but will also trigger the way that the war evolves and eventually ends. After all, Russia seeks to control Ukraine in its entirety – in this sense, holding Kyiv has always been the key strategic element for Moscow. But this is something to consider after 2024.

## **2) THE POTENTIAL FOR FURTHER MAJOR SUPPLY CHAIN DISRUPTIONS DUE TO GROWING GLOBAL FRAGMENTATION DUE TO INCREASED SECURITY RISKS**

The war in Gaza is a major case in point – and a major question to resolve in 2024. The last months of 2023 have been among the most brutal in recent Israeli and Palestinian history.

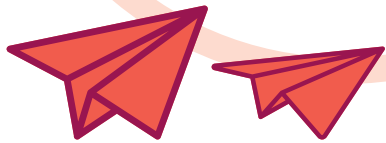
For businesses, this translates into the potential for the conflict to disrupt global oil supplies. A bigger confrontation including Iran or other major oil producers might result in an oil price surge equivalent to the height of the Russia-Ukraine war.

In 2022, the surge in inflation led to quick interest rate hikes in several nations, limiting governments' capacity to utilise expansionary fiscal policy to fight the weakening economic activity. Despite falling inflation, high interest rates and weaker growth remain. Therefore, with not much growth during the last years, a certain demand resilience has developed. This means that while energy prices (potentially coupled with harsh climate conditions) may trigger an increase in food prices, the adaptation will continue. Considering that developed countries have their population lower threshold to food supply disruptions, which include price increases, it is likely that they are the most affected by such a scenario.

At the same time, given the Chinese prospects for limited growth coupled with its visible opening to the US, considering both countries' strategic need to maintain good bilateral relations (for different reasons), it is likely that energy demand will grow – even modestly – during 2024, which could also



**Societal aging in Europe, Japan, and China reduces labour supply at a time when immigration restrictions in most developed countries impede the transfer of labour from poor to rich countries, all of which raise labour prices.**



translate into an increase of the price of energy. While China and the US seem to have gotten to an understanding, this doesn't translate into a halt of the "decoupling" or de-risking policy that the West has promoted in response to problems resulting from too much dependency on the global supply chains.

Considering the current security environment – where regional kinetic warfare seems to be on the rise, de-globalisation will only continue to accelerate. Higher insurance costs for all merchandise being shipped internationally since 2022, especially in areas affected by war, such as the Black Sea and the Eastern Mediterranean, resulted in more countries changing from free trade to secure trade, and from economic integration to decoupling and "de-risking." Reshoring, near-shoring, and "friend-shoring" all suggest a trade-off between efficiency and robustness, with just-in-time global supply chains giving way to "just-in-case" arrangements. Furthermore, societal aging in Europe, Japan, and China reduces labour supply at a time when immigration restrictions in most developed countries impede the transfer of labour from poor to rich countries, all of which raise labour prices.

All of this makes for a difficult business environment but because we are no longer in an acceleration mode of change, firms are more or less accustomed to making adjustments as events unfold. As the end of the cost-of-living crisis will relieve some short-term constraints on policymakers, they will need to become fiscally creative to rebuild public finances and protect

governments from increasing borrowing costs – all while trying to stay away from austerity measures which will be increasingly unpopular. All of this means that while political support for moderate, liberal policies will remain weak, economic policymaking will become more insular, which, while potentially effective at the national level, will likely harm international cooperation on important climate and technological challenges.

## Conclusion

In times of crisis, innovation usually results from flexibility in adaptation to the market environment, including to those elements that stem from geopolitical events. In this sense, several factors help mitigate geoeconomic risks in 2024. Rising productivity and rising market power are the twin outcomes of the innovation process.

First, agility – responding swiftly to changing market conditions entails recognising new opportunities, revising business models, and adapting operations to new client demands. Second, financial adaptability – maintaining a healthy cash flow which means having enough reserves and access to capital while cutting needless costs and improving processes to free up resources for critical activities and avoid excessive debt. All this makes for ensuring financial sustainability. Third and perhaps most important – keeping the focus on the customer, and keep effective communication both with the customer and the staff, especially when crisis hits. Because crisis conditions can have a big impact on customer behaviour, firms must be adaptive and sensitive to their needs. At the same time, maintaining good communication with your staff and customers fosters trust and collaboration.

These three layers are not new for the business environment. However, in 2024, two years after the war in Ukraine started and the pandemic ended, and as the world adapts to a new global reality and as de-globalisation continues, firms need to continue adapting by increasing their flexibility in making decisions.

# IT'S IN THE BAG – FROM THE MOST COLOURFUL SHOP IN THE WORLD

Alexandra Lewis lives in South London and works in marketing and communications at professional services firm Aon. A recent road trip across Portugal with her husband Dave led to Portuguese paper consumption goods producer Renova's store in Torres Novas.

**R**ecently we went on an epic road trip across Portugal, driving from Lisbon up to Porto and eating our way through many of the country's wonderful pastel de nata! I have a love of collecting anything that is wonderful and quirky, and a particular fondness for bags and napkins with unique designs – I have been collecting intriguingly designed ones from bars, restaurants, and shops for many years!

So my husband Dave suggested we stop off in Torres Novas, Zibreira, to visit a place he knew

would fit the bill - "the most colourful shop in the world", also known as Renova's gift shop.

We had so much fun. The branding across the whole range is amazing! The store is packed full of all Renova's products and special limited-edition items, and so of course we had to fill up a Renova branded bag. It contained a large pack of purple tissues, my favourite colour.

And, of course, I also had to pick up the limited-edition pocket tissues with the iconic Mary images.

## HISTORY

The origins of the Renova brand date back to 1818, where the first use of the Renova watermark on paper manufactured in the location where the company still maintains its headquarters today was identified.

**A milestone:** the launch of Renova Black, the first black toilet paper in the world, reaching the status of an iconographic product

**Company motto:** "Colourful designs and new functional solutions through stylish and environmentally-happy products"

**Millennium:** Renova launched the first range of paper products certified with the European Union Ecolabel, Renovagreen, which are products manufactured with 100% recycled paper and packaged in recyclable paper

**Investment:** in 2015, Renova became the first European tissue producer to invest in Valmet's Advantage NTT tissue technology. PM7 started-up the line at its Torres Novas site in 2016.







Dave in the Renova Torres Novas store



Alex with her favourite pack of purple tissue products



# SPECIAL FEATURE: PROJECTS SURVEY 2024

TWM’s annual Projects Survey charts all new capacity being added, ordered or in final planning stages during 2023-2024, as well as noting any projects already planned for 2025.

COUNTRY	COMPANY	INVESTMENT	PM No	NEW/ REBUILD	START-UP DATE	CAP. CHANGE (tonnes/yr)
Africa	Jumbo Centre (Pty)	Johannesburg	4	New	2023	30,000
Australia	ABC Paper & Tissue	Sydney	2	New	2023	N/A
Argentina	Celupaper	Buenos Aires	5	New	2024	23,400
Bangladesh	City Group	Dhaka	1	New	2024	40,000
Brazil	Bracell Cellulose	NA	4	New	2024	NA
Brazil	Bracell Cellulose	NA	3	New	2024	NA
Brazil	Bracell Cellulose	NA	2	New	2024	NA
Brazil	Bracell Cellulose	NA	1	New	2024	NA
Brazil	Ouro Verde	Paulo Bento, Rio Grande do Sul	1	Rebuild	2023	7,500
Brazil	Mister Paper	Major Vieira, Santa Catarina	2	New	2024	14,000
Brazil	Araucária Papéis	Chopinzinho, Paraná	2	New	2025	25,000
China	Asia Symbol	Shandong	34	New	2023	NA
China	Asia Symbol	Shandong	33	New	2023	NA
China	Confidentia	Confidentia	5	New	2024	25,200
China	Confidentia	Confidentia	6	New	2024	25,200
China	Confidentia	Confidentia	1	New	2024	35,200
China	Confidentia	Confidentia	2	New	2024	35,200
China	Hengan	Fujian	NA	New	2024	40,000
China	Hengan	Hubei	NA	New	2023	40,000
China	Hengan	Hunan	1	New	2023	30,000
China	Hengan	Shandong	1	New	2023	25,000
China	Hengan	Yunfu	30	New	2023	NA
China	Hengan	Yunfu	29	New	2023	NA
China	Hengan	Yunfu	28	New	2023	NA
China	Hengan	Yunfu	27	New	2023	NA
China	Lee & Man Group	Guangxi	1	New	2023	1,800
China	Lee & Man Group	Guangxi	2	New	2023	1,800
China	Lee & Man Group	Guangxi	3	New	2023	1,800
China	Lee & Man Group	Guangxi	4	New	2023	1,800
China	Lee & Man Group	Guangxi	5	New	2023	1,800

	PM TRIM (m)	PM SPEED (m/min)	SUPPLIER	COMMENTS
	2.7	1,800	Toscotec	AHEAD 1.8
	3.6	2,000	A. Celli	iDEAL 2000
	2.7	1,300	Toscotec	MODULO-PLUS
	NA	2,200	Toscotec	AHEAD 2.2
	5.6	2,000	Andritz	PrimeLine™ W 2000 (ShoePress)
	5.6	2,000	Andritz	PrimeLine™ W 2000 (ShoePress)
	5.6	2,000	Andritz	PrimeLine™ W 2000 (ShoePress)
	5.6	2,000	Andritz	PrimeLine™ W 2000 (ShoePress)
	2.4	1,200	Hergen	Former Section
	2.36	1,300	Hergen	NA
	2.86	1,800	Hergen	NA
	5.6	1,900	Andritz	PrimeLine™ W 2000 (ShoePress)
	5.6	1,900	Andritz	PrimeLine™ W 2000 (ShoePress)
	2.85	1,600	Valmet	IntelliTissue 1600
	2.85	1,600	Valmet	IntelliTissue 1600
	3.5	1,600	Valmet	IntelliTissue 1600
	3.5	1,600	Valmet	IntelliTissue 1600
	3.65	1,500	Toscotec	TADVISION
	3.65	1,500	Toscotec	TADVISION
	3.65	1,800	Baosuo	Crescent Former TM
	2.85	1,800	Baosuo	Crescent Former TM
	3.6	1,700	Andritz	PrimeLineCOMPACT M 1600
	3.6	1,700	Andritz	PrimeLineCOMPACT M 1600
	3.6	1,700	Andritz	PrimeLineCOMPACT M 1600
	3.6	1,700	Andritz	PrimeLineCOMPACT M 1600
	2.85	1,300	Baosuo	Crescent Former TM
	2.85	1,300	Baosuo	Crescent Former TM
	2.85	1,300	Baosuo	Crescent Former TM
	2.85	1,300	Baosuo	Crescent Former TM
	2.85	1,300	Baosuo	Crescent Former TM

An impressive 108 new projects are listed in this year's annual Projects Survey, which charts the accumulation of tissue capacity data collected across the global industry during 2023, and the projects expected to start-up in 2024 and 2025.

This compares with 102 tissue projects listed in 2023's survey, 157 listed in 2022's survey, and the 146 tissue machine projects that were listed in 2021's.

TWM's annual Projects Survey gains significant intel from the magazine's six annual Country Reports, which in 2023 included in-depth interviews with tissue mills in Germany, Spain, South Korea, North America, the Middle East, and Brazil. Wide ranging news coverage throughout 2023 and into 2024 has also reported on the latest tissue machinery investments from across every continent. In many cases, information and investment strategy have come from leading executives themselves.

While the survey represents a detailed snapshot of production strategies in all the major tissue regions, as always caution must be considered with the survey's findings due in large part to its sheer scope. The figures included here are based on the best information provided, and this has included extensive research into the global tissue industry over the past few years, as well as a reliance on reliable responses from the many companies contacted to detail their present and future developments.

And as is often the case, many of last years predicted start-ups have been delayed and are now planned for 2024, and some of the 'new' capacity

COUNTRY	COMPANY	INVESTMENT	PM No	NEW/ REBUILD	START-UP DATE	CAP. CHANGE (tonnes/yr)
China	Lee & Man Group	Guangxi	1	New	2024	30,000
China	Lee & Man Group	Guangxi	2	New	2024	30,000
China	Lee & Man Group	Guangxi	3	New	2024	30,000
China	Lee & Man Group	Guangxi	4	New	2024	30,000
China	Lee & Man Group	Guangxi	5	New	2024	30,000
China	Lee & Man Group	Guangxi	6	New	2024	30,000
China	Liansheng Pulp & Paper	NA	2	New	2023	NA
China	Liansheng Pulp & Paper	NA	1	New	2023	NA
China	Liaoning Yusen	Tai'an	5	New	2024	34,300
China	Liaoning Yusen	Tai'an	6	New	2024	34,300
China	Libang Group	Hubei	1	New	2023-2024	19,500
China	Libang Group	Hubei	2	New	2023-2024	19,500
China	Libang Group	Hubei	3	New	2023-2024	19,500
China	Libang Group	Hubei	4	New	2023-2024	19,500
China	LongPai Paper	Guangxi	1	New	2023	18,000
China	Qiangwei Paper	Shanxi	1	New	2024	25,000
China	Qiangwei Paper	Shanxi	2	New	2024	25,000
China	Royal Golden Eagle	Guangdong	1	New	2024	25,000
China	Royal Golden Eagle	Guangdong	2	New	2024	25,000
China	Royal Golden Eagle	Guangdong	3	New	2024	25,000
China	Royal Golden Eagle	Guangdong	4	New	2024	25,000
China	Royal Golden Eagle	Jiangxi	1	New	2023	25,000
China	Royal Golden Eagle	Jiangxi	2	New	2023	25,000
China	Royal Golden Eagle	Jiangxi	3	New	2023	25,000
China	Royal Golden Eagle	Jiangxi	4	New	2023	25,000
China	Royal Golden Eagle	Jiangxi	1	New	2024	25,000
China	Royal Golden Eagle	Jiangxi	2	New	2024	25,000
China	Royal Golden Eagle	Jiangxi	3	New	2024	25,000
China	Royal Golden Eagle	Jiangxi	4	New	2024	25,000
China	Sun Paper Group	Guangxi	1	New	2024	25,000
China	Sun Paper Group	Guangxi	2	New	2024	25,000
China	Sun Paper Group	Guangxi	3	New	2024	25,000
China	Xianhe Shares	Hubei	1	New	2024	25,000
China	Xianhe Shares	Hubei	2	New	2024	25,000
China	Yuen Fong Yu	Taiwan	10	New	2023	112admt/d
China	Yusen Gansu	Pingilang	1	New	2024	33,700
China	Yusen Gansu	Pingilang	2	New	2024	33,700
China	Yusen Gansu	Pingilang	3	New	2024	33,700
Cololmbia	GrandBay Papeles Nacionales	Pereira	5	New	2024	40,000
Confidentia	Confidentia	Confidentia	1	New	2025	NA
Confidentia	Confidentia	Confidentia	2	New	2025	25,000



[illegible]

announced this year includes some of last year's estimate. Additionally, some companies declined to comment on their projects at this time. There are also a substantial number of confidential projects.

## NOTABLE POINTS TO INCLUDE

While last year's survey had been a year dominated by Covid-19, 2023 was a year where wars, the cost-of-living crisis, the energy crisis, and inflation made headlines. With that in mind, the 108 number of tissue projects listed is an impressive feat. A special mention must go to two projects launched in the most extreme circumstances: in Ukraine, where Kochavinska Paper Factory started-up its A.Celli-supplied turnkey iDEAL tissue line at its site in the Lviv region on 28 October 2023, and Israel's Panda Paper Mills (1997), which announced a Toscotec-supplied complete drying section rebuild of PM1 at its Netanya production facility, which is expected to start-up in the second half of 2024.

Environmentally focused projects have been accelerated. Increasing in the past 12 months almost more than any other are the number of tissue projects announcing ambitious sustainability actions and targets. One positive, at least, to come from the ongoing energy crisis.

This year some 57 projects are in China, again the largest number of start-ups in any country. However, as the Chinese economy goes through a slowdown and fears grow over overcapacity, the figure is substantially lower than last year's survey that expected 80 tissue machines to come on stream. This slowdown could be a result of ongoing overcapacity in the country. It is also important to note there are numerous other small confidential start ups in China not listed here.

Across the Middle East, one confidential project is also expected to start up, while Saudi Arabia has three new lines expected to come on stream during 2023 and 2024. Whilst in previous surveys Türkiye looked robust – with six tissue machines that were projected to come on stream in 2021, 2022 or 2023 – this year just one project is expected to start-up.

COUNTRY	COMPANY	INVESTMENT	PM No	NEW/ REBUILD	START-UP DATE	CAP. CHANGE (tonnes/yr)
Confidentia	Confidentia	Confidentia	NA	New	2024	38,000
Confidentia	Confidentia	Confidentia	NA	New	2024	38,000
Confidentia	Confidentia	Confidentia	NA	New	2024	65,000
Confidentia	Confidentia	Confidentia	NA	New	2024	60,000
Confidentia	Confidentia	Confidentia	NA	New	2024	70,000
Confidentia	Confidentia	Confidentia	NA	New	2023	35,000
Confidentia	Confidentia	Confidentia	NA	New	2024	34,200
Croatia	Astrabel Belišće	NA	1	New	2024	NA
El Salvador	Alas Doradas	San Salvador	NA	New	2023	35,000
EMEA	Confidentia	Confidentia	NA	New	2024	70,000
Ghana	Triton	Kokomlemle	1	New	2025	23,800
Guatemala	Papelera Internacional, Grandbay Group	Rio Hondo Zacapa	7	New	2023	60,000
India	Gayatrishakti Tissue	Vapi, Gujarat	1	New	2024	35,000
Japan	Confidentia	Confidentia	4	New	2023	32,000
Japan	Confidentia	Confidentia	3	Rebuild	2023	19,000
Japan	Confidentia	Confidentia	1	Rebuild	2023	14,000
Japan	Confidentia	Confidentia	1	New	2023	36,000
Japan	Confidentia	Confidentia	3	New	2023	36,000
Mexico	Grupo Corporativo	Mexico City	5	Rebuild	2024	NA
Mexico	Papel San Francisco	Mexicali	9	New	2024	30,000
Mexico	Papel San Francisco	Mexicali	10	New	2025	30,000
Mexico	Softys	Altamira	5	New	2025	NA
Middle East	Confidentia	Confidentia	NA	New	2024	NA
Poland	Jack-Pol	Olawa	2	New	2023	27,600
Romania	Pehart	Dej	2	Rebuild	2023	NA
Romania	MG TEC Industry	NA	2	New	2023	NA
Saudi Arabia	MEPCO	Jeddah	4	New	2023	60,000
Saudi Arabia	Saudi Paper Group	Dammam	2	New	2023	30,000
Saudi Arabia	Saudi Paper Group	Dammam	5	New	2024	80,000
Sweden	Metsä Tissue	Mariestad	NA	New	2024	70,000
Türkiye	Europap Tezol	Mersin	4	New	2023	40,000
Vietnam	Xuong Giang	NA	12B	New	2024	54tpd
Vietnam	Xuan Mai Paper	NA	2	New	2024	72admt/d
Ukraine	Kochavinska Paper Factory	Lviv	3	New	2023	NA
USA	Procter & Gamble	Utah		New	2024	Confidentia
USA	Sofide	Circleville	3	New	2025	70,000
USA	ST Paper	NA	2	New	2023	NA

	PM TRIM (m)	PM SPEED (m/min)	SUPPLIER	COMMENTS
	3.5	2,000	Valmet	Advantage eTAD 135
	3.5	2,000	Valmet	Advantage eTAD 135
	5.6	2,200	Valmet	Advantage DCT 200TS
	5.6	2,000	Valmet	Advantage DCT 200HS
	5.6	2,200	Valmet	Advantage DCT 200TS
	3.5	2,000	Valmet	Advantage DCT 135HS
	2.75	1,800	Valmet	IntelliTissue 1800
	3.6	1,700	Andritz	PrimeLineCOMPACT S 1300
	2.8	2,000	Valmet	Advantage DCT 100HS
	5.6	2,200	Valmet	Advantage DCT 200TS
	2.75	1,600	Valmet	IntelliTissue 1600
	5.5	2,200	Toscotec	AHEAD 2.2L
	2.85	1,900	Toscotec	AHEAD 1.8
	3.6	1,300	Kawanoe Zoki	BF-15 Towel
	2.6	700	Kawanoe Zoki	BF-12 Towel
	2.2	400	Kawanoe Zoki	BF-15 Towel
	3.6	1,800	Kawanoe Zoki	DCT135
	3.6	1,800	Kawanoe Zoki	DCT135
	2.8	1,800	A. Celli	Forged Yankee Dryer, head box and main parts
	2.8	2,200	Valmet	Advantage DCT 100TS
	2.8	2,200	Valmet	Advantage DCT 100TS
	NA	2,200	Toscotec	AHEAD 2.2
	NA	1,500	Toscotec	AHEAD 1.6
	2.85	1,600	Valmet	IntelliTissue 1600
	2.8	1,800	A. Celli	Forged Yankee Dryer and Show Press
	2.8	1,900	Andritz	PrimeLineCOMPACT V (Steel Yankee)
	NA	2,200	Toscotec	AHEAD 2.2L
	2.85	2,100	Toscotec	AHEAD 2.2
	5.6	2,200	Toscotec	AHEAD 2.2L
	5.6	2,200	Valmet	Advantage DCT 200TS
	2.92	2,100	Toscotec	AHEAD 2.2S
	3.8	1,800	Andritz	PrimeLineCOMPACT S 1300
	2.8	1,800	Andritz	PrimeLineCOMPACT S 1800
	2.8	1,500	A.Celli	EVO-LOCK Yankee Dryer
	5.4	1,627	Andritz	PrimeLineTAD
	5.6	2,000	Valmet	Advantage DCT 200HS
	5.6	2,000	Andritz	PrimeLineTM W 2000 (ShoePress)

Lastly, a timely note to begin on at the start of 2024, and this January/February TWM's Regional Report: Latin American.

The Brazilian tissue market continues to go from strength-to-strength – while last year's survey noted just two tissue projects expected to come on stream, this year notes seven, six of which are expected to start production in 2024, and all of which are supplied by Andritz or Hergen.

There is also one tissue project expected to be started up in each of Argentina, Colombia, El Salvador, and Guatemala, and three new tissue machines and one rebuild in Mexico.

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 last year's Project Survey has had to be repeated. We welcome your help to ensure as comprehensive a survey as possible at the end of 2024-2025.





# PAPER MACHINE: TECHNICAL THEME – THE GLOBAL TREND DEMANDING HIGHER QUALITY TISSUE PRODUCTS IS RISING

Leading companies outline their strategies for virtuous and cost controlled energy, hybrid technologies, the importance of quality AI, and the “profound impact” the EU’s Green Deal will have on the industry.

## TWM/1: WHAT TECHNOLOGICAL ADVANCEMENTS REALLY STAND OUT FOR YOUR BUSINESS FROM THE PAST YEAR, AND WHAT R&D ARE YOU LOOKING INTO FOR 2024?

**Luca Billi, Sales Manager, A.Celli Paper:** “Over the past year, the A.Celli group has matured, developed and designed a series of technological innovations that have had a positive spin-off and been well-received by the industry. With regards to the tissue world in particular, our main effort has been concentrated on the development of the new SMARNIP T technology, a shoe press for tissue that improves efficiency and performance while preserving the integrity of the final product and maintaining its bulk and softness. Our new solution combines the reliability and robustness of the previous versions developed by PMT with the functionality and low maintenance requirements of pneumatic feeding. Of course, interesting developments are also in the pipeline for 2024, which we will continue to introduce to the market, with the main objective of satisfying our customers’ needs.”

**Paul Richards, Senior Technology Manager Tissue, Andritz:** “PrimeLineTIAC – our Tissue Innovation and Application Centre located in Graz, Austria – is an excellent tool for Andritz and its customers to develop methods for reducing their overall CO2 footprint by investigating various process inputs and outputs: furnish (alternative fibres), energy sources (gas, steam, electricity), and fresh water as well as effluent, chemicals, and emissions. What’s more, the PrimeLineTIAC is also a birthplace of Metris, Andritz’s digital solutions for the tissue industry. Several of the concepts have made it to the order phase and are being implemented to further reduce the industry impact on our environment.”

**Benny Peng, Vice president, Baosuo Paper Machinery Manufacture Co.:** “Improving equipment operation speed and stability is the main way to create higher production efficiency for customers. In 2023, our model with a design speed of 1,600m/min broke through the highest operating speed record and highest production efficiency index for the first time. Customers repeated orders for the same model in twice the quantity in the second phase. Additionally, Baotuo paper machine has achieved technological breakthroughs in the 1,800m/min model and has won the favour of some high-end customers at home and abroad, reaching purchase intentions.

“In 2024, our research and development work will focus on the upgrade and optimisation of existing models and the research and development of TAD paper machines. TAD paper machines have the advantages of saving raw materials, product multi-functionality and high-water absorbency, and are favoured by tissue manufacturers. Our newly developed TAD machine is expected to be put on the market in 2024. We provide TAD paper machine equipment and services to high-end paper product manufacturers.”

**Shinji Goda, Director, General Manager of Design Department, Kawanoe Zoki:** “We are working with our customers to develop products utilising pilot converting machines in our technical centre. This year, we have newly introduced a thermal calendar to manufacture prototypes and collect test data for paper, non-woven fabrics, other sheets, and composite materials. We will continue to develop new products together with our customers. We have also already succeeded in making continuous sheets made from cellulose nanofibres.

“This year, we have presented our results at various exhibitions and academic conferences related to cellulose nanofibers and have received

a variety of positive feedback. The characteristics of the sheets produced from the supplied raw materials vary, and we expect to continue to contribute to the development of their applications in the household paper industry."

**Francesco Simoncini, R&D Technical Manager,**


**Toscotec:** "In the dynamic space of paper machinery, innovation stands as the driving force of progress. This industry is grappling with a unique challenge: balancing the pursuit of enhanced efficiency with the ever-evolving demands of customers. The delicate equilibrium between technological advancement in a traditional market and meeting customer requirements is central to the evolution of this space. First and foremost, Toscotec has increasingly been focusing on decarbonisation in recent years by ensuring that its technology can function with renewable energy. Many innovations focused on decarbonisation and reduction of the environmental footprint of tissue making lines are scheduled to be disclosed and introduced into the market soon. These go hand-in-hand with technologies designed to reduce and differentiate resources such as water and fibres. Secondly, lower energy requirements have also been achieved by introducing more efficient methods of dewatering like the capillary medium. Toscotec's new INGENIA concept represents the summa of all the main innovations recently developed. INGENIA is a flexible production line of both structured and dry creped tissue, where energy efficiency, easy operation, and maintenance have come together in a coherent system.

"Thirdly, we continue improving existing products, with a special focus on Toscotec's iconic product, the Steel Yankee Dryer. We upgraded TT SYD's proved reliability by aligning all its manufacturing procedures with state-of-the-art technological advancements and introducing a special treatment for the internal surface for operation even in the most aggressive conditions. Moreover, interesting product development results have been achieved with the new OPTIMA line that completely renewed the rewinder section to preserve the tissue properties of the parent reel, maximising softness and product quality."

**Jenny Lahti-Samuelsson, Vice President,**

**Tissue Mills Sales, Valmet:** "The first priority is developments that contribute to optimising operational cost of customers' machine base, including sustainable solutions. Not only development of disruptive solutions but also incremental improvements of current technologies and utilisation of new technologies already applied in other industries.

"For example, using hydrogen and electricity as power supply for hot air in the drying process, as well as optimising press, Yankee, and hood with



**"Our main effort has been concentrated on the development of the new SMARNIP T technology, a shoe press for tissue that improves efficiency and performance"**

**Luca Billi**


Sales Manager, A.Celli Paper

respect to linear loads, Yankee diameters and hood solutions. Secondly, we see a need of product development to make tissue manufacturing "easier to operate," whether it is with help of digital tools or simpler interfaces, less maintenance needs etc.

"Thirdly we face an increasing interest in upgrades and rebuild solutions to help customers optimise their existing machine fleet. It is not only the technology itself that is of importance; also, it is of essence how we are executing the projects together, as supplier and customer to have a smooth and successful project. As always, the constant cost pressure forces us in finding the more cost-efficient solutions also from a customer capital investment point of view."

## **TWM/2: WHAT REQUESTS HAVE CUSTOMERS BEEN MAKING IN TERMS OF IMPROVED ENERGY EFFICIENCIES IN 2023, AND HOW HAS YOUR BUSINESS RESPONDED?**

**Billi:** "All technological solutions developed by A.Celli are conceived, right from the conception and design phase, with a focus on efficiency. This approach allows us to guarantee our customers low energy impact production. As evidence of this trend we can mention, in addition to the already mentioned Shoe press SMARNIP T technology, other recent innovations that we have launched on the market in recent years, such as the forged Yankee dryer, its iDEAL Evo-lock variant and the A.Celli X-Roll. To complete the offer with a view to



**"Our intention is to keep improving in reducing energy consumption and reducing the fossil fuels usage. Our customers need developments in those areas to operate more efficiently"**

**Paul Richards**  
Senior Technology Manager Tissue,  
Andritz

integration but always with a focus on efficiency, the A.Celli group has recently promoted the R-WAY solutions dedicated to automatic product handling and plant intralogistics. In a more general and transversal perspective, talking about the subject of digitisation, we have developed a specific solution that is part of the OMNIA DP offer. One application, in particular, 'Energy Management', is capable of collecting production data from all the gateways on the machinery and analysing it to obtain a complete overview of the energy consumption of all the equipment in the plant. Moreover, the application provides indicators for monitoring and useful information for reducing emissions as well as for the precise identification of the cost per unit of product."

**Richards:** "As one part of this commitment to sustainability, we have made significant progress in energy reduction in general. The reduction in energy use makes both economic and environmental sense – basically, it is a sustainable strategy in the full sense of the term. Regarding the latter, we have specifically made significant progress in reducing the use of fossil fuels by developing efficient green energy solutions. Our clear intention is to keep improving in both areas – reducing energy consumption in general as well as reducing the use of fossil fuels. Ultimately, our customers need new developments in both of those areas to operate more efficiently, especially considering the challenges posed by the global energy supply and the instabilities we all face. Andritz will therefore remain highly committed to developing

technologies that reduce energy costs while also enabling enhanced product quality.

"To provide one concrete example for PrimeLine™, Andritz has optimised its shoe press design and concept. Our PrimePress XT Evo, with its patented loading design that ensures a constant pressure in CD, along with its edge control system and optional cantilevered design, has tangibly helped tissue manufacturers capitalise on energy and fibre savings without sacrificing their OEE (overall equipment effectiveness). In dryness mode, for example, the after-press dryness can increase by up to 6% compared to a suction press roll, resulting in thermal energy savings of up to 24%. In quality mode, paper bulk is improved, resulting in better paper quality and/or possible fibre savings of up to 10% compared to conventional presses. We have recently installed and started up a PrimePress XT Evo fully cantilevered shoe press on a new PrimeLine™ in North America, as well as a rebuild to the same, in the European region. As for PrimeLineTAD, Andritz continues to optimise its very successful steel Yankee dryer, thereby demonstrating its capability for TAD applications. At the same time,

we continue to investigate advanced dewatering concepts to reduce energy usage, together with alternative fuel sources, to reduce the environmental impact in TAD."

**Godar:** "We are continuously receiving requests for energy reduction proposals in response to the demand for CO<sub>2</sub> emission reductions. However, there are many cases in which customers are wondering how to proceed in a specific order. For this reason, we have started "Equipment Diagnosis" of the current situation that will provide hints for energy saving. Firstly, we accurately grasp the current situation, and then in consultation with the customer we propose the most appropriate energy efficiency modification that meets the customer's budget. We also conduct "Equipment Diagnosis" after the modification, share the results, and continuously discuss the next steps toward greater efficiency."

**Peng:** "Customers have put forward higher requirements for reducing the energy consumption of water, electricity and steam used by paper machines. In response to customers' needs for energy saving and consumption reduction in production, we have taken the following measures:

- Optimize water treatment processes. We recommend customers use more efficient water treatment devices to improve the quality of production recycled water. Part of the clean water used on the paper machine can be replaced with ultra-clean recycled water, such as high-pressure cleaning water for screens and carpets.



# IS MAKING ADJUSTMENTS TO YOUR YANKEE COATING WORTH THE RISK?



In many mills, the Yankee coating is a legacy application that hasn't been significantly changed in years. It's viewed as too risky to mess with—particularly with market demand and internal pressures pushing you to make more tons more efficiently. As such, mills often eschew upgrading the Yankee coating in favor of wet end or converting changes. Even with these approaches adding value, by avoiding a potential short-term disruption of a Yankee coating trial, you may have locked in sub-optimal Yankee coating conditions for the long term.

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- For a long time, high-power consumption processes have used the IE5.0 high-efficiency intelligent control motor with higher energy saving effect. Depending on the occasion used, the energy saving effect is 25%-35% higher than that of conventional variable frequency motors. Reducing energy costs can bring more substantial returns to customers.
- Optimise steam condensate system. Only the Yankee cylinder uses fresh steam, and all steam hoods use secondary steam heating, which maximises the recovery of heat energy in the steam to reduce unnecessary waste."

**Simoncini:** "The tissue industry advances several key requests and priorities when it comes to energy efficiency. Improving energy efficiency is important not only to reduce operational costs but also for environmental sustainability. The latter is becoming more and more important, considering new environmental legislations that are currently being passed globally. This trend is certainly not going to change in the short and medium period. In this climate of global instability, paper producers are more careful in evaluating big investments directed at installing new, state-of-the-art, highly efficient tissue making plants. At the same time there's an increasing number of major rebuilds or even smaller projects with a focus on productivity and energy efficiency of existing plants. In any case with well-conceived implementations, it is possible to substantially increase the efficiency of old plants with limited investments. Customers usually ask for energy

surveys to find out the best efficiency intervention for their specific case. A significant efficiency increase is obtained by replacing the most energy-intensive components, for instance in the dryer section and air system. Here the integration of dewatering and drying processes obtained with recovery systems enables the production of steam and hot air even from low temperature exhaust gases."

**Lahti-Samuelsson:** "There is a growing interest in Valmet's hybrid technologies based on the global trend towards higher tissue quality. Looking closer at the hybrid technologies, the results from the latest installations are clear; tissue quality close to ultra-premium can be achieved with a comparably significantly lower energy and fibre consumption. But even smaller investments in rebuilds or upgrades in the pressing and drying area can have a significant impact on the energy and production efficiency. The Advantage ViscoNip press has become a benchmark in reducing energy consumption and at the same time improving runnability and tissue quality"

### TWM/3: HOW IS AI CHANGING YOUR BUSINESS, AND WHAT OPPORTUNITIES AND CHALLENGES ARE THERE FOR THE TISSUE INDUSTRY GENERALLY IN ADAPTING AND ADVANCING WITH AI?

**Billi:** "Systems and applications that base their functionality on the use of AI are now increasingly present in the industrial fabric industry, not only in the paper industry, but across all sectors. This transition is profoundly affecting the way companies operate and compete. It is now obvious that those who manage to exploit these technologies could gain a significant competitive advantage over their competitors. A.Celli guarantees a very high level of attention to the evolution of these disciplines and of the entire IT and digital sector. Our commitment goes back a long way to when, in 2016, a division dedicated to digital solutions, Extreme Automation, was founded. Today, our offering – OMNIA DP – consists of a flexible, cloud-based software suite capable of monitoring and improving almost every aspect of a production plant, from anywhere, at any time. The integration of all this, with the generative potential offered by artificial intelligence systems, is already being implemented."

**Richards:** "Autonomous operation of industrial plants refers to the plant or facility's ability to operate and manage its processes with minimal human intervention. This means that the plant can function independently, without the need for constant human oversight. The concept involves integrating advanced technologies such as AI, machine learning, robotics, and the Internet of Things (IoT) to enable self-monitoring, self-diagnosis, decision-making, and control. The goal of autonomous operation in industrial plants is to



**"With well-conceived implementations, it is possible to substantially increase the efficiency of old plants with limited investments."**

**Francesco Simoncini**  
R&D Technical Manager,  
Toscotec



enhance productivity, reduce operational costs, improve safety, and optimise resource utilisation. By leveraging advanced technologies and intelligent systems, these plants can achieve higher levels of efficiency, reliability, and responsiveness in their operations. In an autonomous industrial plant, multiple systems and components collaborate to enhance performance, productivity, and efficiency, while also ensuring safety and compliance. With a single integrated solution, Metris Andritz-Digital Solutions combines several essential elements to achieve autonomous operation in industrial plants."


**Peng:** "AI has achieved great success in the application of turnkey solution for tissue intelligent equipment provided by Baosuo Enterprise Group. The production line provided to Asia Symbol's Guangdong base requires no manual intervention from the paper machine, converting, packaging, and warehousing. According to this standard, the second phase of construction was determined. At the same time, we optimise equipment performance, operating experience, production efficiency and other indicators, hoping to bring better experience and higher benefits to customers."

**Goda:** "Currently, our design department is using AI to implement a design system kaizen (a Japanese term meaning change for the better or continuous improvement) called "Design Kaizen". This is to consolidate design know-how from the past to the present and realise "knowledge sharing" using AI. We expect that this will dramatically increase the speed of development by sharing innovative ideas with others and at the same time, reducing the burden on designers. In the near future, we believe that AI will be very effective in improving productivity by accumulating a variety of data on the equipment we provide, such as monitoring equipment and optimising operating conditions using AI."

**Simoncini:** "AI is a technology that involves the use of computer systems and algorithms to enable machines, processes, and systems to perform tasks that typically require human intelligence. AI in the industry aims to enhance efficiency, productivity, and decision-making by simulating human-like cognitive functions, such as problem-solving, learning and perception. In this field, since we've become part of Voith, we have benefitted from the great experience developed by BTG or Voith itself. Our approach to AI-supported automation is to progressively integrate advanced AI systems in our machines based on levels of advancement increasingly more complex and complete. A first level, called Data Park, includes a supervision system of data storage and analysis aimed at finding non-trivial correlations between several and different process and system measurements."

This proved to give a strong support to machine operators, mainly during the commissioning and start-up phases, but also in transient conditions during production changes. A second level includes the generation of Virtual Sensors able to estimate in real-time the value of non-directly measurable quantities (like softness, tensile strength, etc.) based on process data. The knowledge of these values will be of great help to paper mills to correctly schedule the production and to easily manage the transient periods between products changes, increasing the overall plant efficiency. The last level and the final target we are aiming for is the completely automated plant, in which the operator enters the final product specifications and the system, and the AI component is able to set all the parameters to obtain exactly the desired product."

**Lahti-Samuelsson:** "Digitalisation of products is evolving day-by-day taking us towards more autonomous mills. The pace will be set by the actual needs from the industry and of course the payoff of the solutions. The tissue industry is today often challenged by difficulties to find and keep the right competence, and this is itself making the need of AI even more important. We as suppliers have a big role in this development. AI by itself cannot create wonders. It is the amount, quality, and management of data which feeds AI tools that is of importance. The challenge is to keep it at a reasonable cost, which as said will set the pace for advancement of AI applications and solutions."



**"We believe that AI will be very effective in improving productivity by accumulating a variety of data on the equipment we provide, "**

**Shinji Goda**  
Director, Kawano Zoki



#### TWM/4: WHAT ENVIRONMENTAL AND/OR SOCIAL ADVANCEMENTS HAS YOUR COMPANY MADE IN 2023, AND WHAT IS IN STORE IN 2024 FOR THE COMPANY'S SUSTAINABLE DEVELOPMENT?

**Billi:** "The entire A.Celli group has made environmental sustainability goals a cornerstone of its vision by embarking on a virtuous energy path many years ago that sees us efficient and autonomous. All this has allowed us to be a reality that has practically reached the goal of zero impact, thanks to the implementations linked to sustainability and the adoption of best practices, and to the fact that we are, by nature of production, a non-energy consuming and non-polluting company. Also and above all for the future, the A.Celli Group confirms its commitment to pursuing the social responsibility of doing business, through facts, actions and concrete responses, supporting solid and sustainable growth over time."

**Richards:** "Andritz Group is committed to a sustainable future. We aim to achieve significant environmental goals by 2025. We plan to generate 50% of our revenue from sustainable products, reducing our greenhouse gas emissions and waste volume by 50%, and cutting water consumption by 10%. Together, we're building a greener, cleaner tomorrow."

**Peng:** "Focusing on the overall strategic planning goals of Baosuo Enterprise Group, Baotuo Paper Machine continues to increase deeper exploration in energy conservation and consumption reduction. Especially in terms of steam and electricity consumption per ton of paper, which account for a considerable proportion of production costs, we aim to reduce the investment by 5-10% in an investment plan acceptable to customers and promote multiple energy-saving solutions for customers to choose from. At the same time, we pay attention to consumers' demand for tissue and the needs of different tissue manufacturers for production equipment. Comprehensively consider the relationship between ecological protection, social needs and investment funds, we provide a turnkey solution for tissue production that conforms to the concept of sustainable development."

**Goda:** "In order to improve the working environment for workers involved in logistics in Japan, strict overtime regulations will be applied starting in 2024. This is known as the "2024 problem in logistics," and is expected to result in a shortage of drivers and a 14-34% reduction in transportation capacity, a serious problem."

"To avoid these problems, the paper industry has seen an increase in new products that reflect improved transportation efficiency, such as longer



**"Focusing on the strategic goals of Baosuo Enterprise Group, Baotuo Paper Machine continues to increase exploration in energy conservation and consumption reduction."**

**Benny Peng**  
Vice president, Baosuo Paper Machinery Manufacture Co.

toilet rolls, soft-pack tissue cases, and shared transportation pallets, which have already received high valuation and increased sales volumes.

"Through the development of new products arising from these market backgrounds and the resolution of problems faced by customers, we will engage more deeply with customers and meet their needs."

**Simoncini:** "The Green Deal, the EU's ambitious sustainability agenda, is set to have a profound impact on the paper industry in the years to come. With a primary goal of achieving carbon neutrality and fostering a circular economy, this initiative will drive significant changes in paper manufacturing. Toscotec's approach to this huge challenge is not only to introduce technology designed to substantially increase the energy efficiency of the plant, but also to develop components and systems that could give the maximum environmental impact reduction in combination with the decarbonisation of the energy sources."

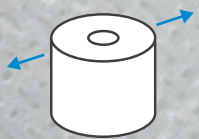
"Energy efficiency is something we have been working on for several years, pushed not only by environmental reasons, but also by the market request to reduce operating costs. This explains the reason why today, the most efficient and modern plants are concentrated in the areas of the world subject to the energy price crises. Toscotec's technology is becoming compatible with low carbon energy vectors to benefit from the increased use of these sources. For instance, electric energy generated



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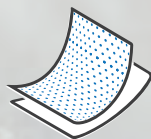
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**"With hydrogen technology utilised as fuel and installation of electrical heaters it is now possible to produce tissue with zero CO<sub>2</sub> emissions."**

**Jenny Lahti-Samuelsson**  
Vice President, Tissue Mills Sales  
Valmet

from renewable sources is becoming more and more common. Toscotec's R&D has been focusing on replacing all the energy-intensive components of the paper mill with systems directly powered by electric energy. For example, heating of the Yankee dryer through induction, heating up the air in the hood system with electrical batteries, and using heat pumps to generate steam. Where the use of electric energy is not fully consolidated in terms of installation or capacity, like in the air systems where relatively high temperatures are required, the possibility to replace natural gas with the use of hydrogen or bio-mass gas is under advanced testing phase.

"Another important field Toscotec is taking into great consideration is water consumption reduction. A lower water consumption is necessary to make paper manufacturing more environmentally friendly to preserve on one side such an important resource and on the other side reduce dewatering and drying needs. This target has been addressed with the introduction of several innovations both for new and existing mills like a tailor-made and integrated approach to the process and the introduction of recovery systems able to work with low temperature exhaust gases. In this way, even the moisture contained in the air system exhausts can be condensed and recovered while the heat is used to generate hot air and low-pressure steam for the plant and the process.

"New disruptive technologies under development aim to drastically reduce water usage in the entire tissue making process. The biggest challenge for these technologies is finding a completely new way to distribute the fibres using less or no water and

less chemicals, while retaining the paper properties typical for tissue products at the end of the process (strength, bulk, softness, absorbency, stretch).

Fibre recovery from alternative sources (non-wood fibres) is also a challenging topic we have been working on in co-operation with several experts in the field: we have been looking at alternative fibres produced from agriculture residues or industrial waste. Many of the above concepts have been already presented to the market and are ready for implementation, like the integrated approach to the use of water and hydrogen, biogas or electrical heaters in the air systems. Other innovations are in the making and will be presented soon."

**Lahti-Samuelsson:** "During 2023, Valmet started up three additional hybrid machines which is clear evidence that there is a demand in the industry for higher tissue quality produced in a more sustainable way i.e. with less energy and fibre consumption. The hybrid technology allows customers to work on end-product design taking benefit of the fact that the same calliper can be achieved with 20-25% less fibre, compared to conventional dry creped tissue. With the hydrogen technology utilised as fuel for hood burners and installation of electrical heaters it is now possible to produce tissue with zero CO<sub>2</sub> emissions (when electricity is produced from carbon free process)."

## **TWM/5: WHAT CHANGES HAVE YOU SEEN IN TISSUE DEMAND/ SUPPLY AND TISSUE TRENDS IN AMERICA AND IN CHINA OVER THE PAST YEAR?**

**Billi:** "The focus on sustainability is an increasingly evident factor. This is noticeable in the North American market, but also globally.

"Particularly in the more developed markets, the trend is clear: consumers are becoming more aware of the importance of recirculation and reuse, and manufacturers are increasingly encouraged to position themselves in the market with 'green' products. This growing interest has generated a demand for environmentally-friendly tissue products, more sustainable production processes and reduced environmental impact.

"The tissue industry is working hard to promote sustainability and circularity throughout the supply chain, starting with a focus on the water and energy used in production processes, thinking about the effects of transporting tissue products, and concluding with their recovery and recycling at the end of their life cycle.

"With reference to China, we have noticed a change in direction, reducing investments aimed exclusively at increasing the quantity of production, and beginning to focus also in the direction of a demand for high quality tissue products, with local



manufacturers thus raising the level of production technology and quality of the final product.

"Ultimately, we look forward to a 2024 full of significant opportunities and challenges for the entire tissue industry."

**Richards:** "The North American market is, in every sense of the word, a mature market. Consumers have definite expectations, and even in times of stress on the markets, are not prepared to compromise those demands in terms of quality and functionality. For this reason, despite the high energy demands TAD is still the driving force in the tissue market. "What is happening though is that our customers are looking at every aspect of their operation to determine how they can meet the environmental expectations of the consumer today. New project enquiries are looking to drive towards net zero carbon or close to it, and as suppliers we are having to use all our development and research efforts to address those needs.

"On the other side of the coin, China is, despite the market size, still a developing market. In many ways the supply side is very fractured, mostly due to the size of the area and the lack of infrastructure away from the industrial East/South East regions. The consumers are starting to force themselves to be heard, and producers are having to respond with product offerings that are moving up the quality ladder into hybrid and TAD areas. Infrastructure is the biggest issue, and in many areas there are insufficient supplies of primary energy to support traditional operations, which is forcing us as suppliers to develop alternative systems that can operate at the lowest possible energy levels, thereby creating an additional focus on overall energy reduction R&D needs. This certainly looks set to continue, and even accelerate, over the coming years."

**Peng:** "In the past year, as a necessary consumer product for people's lives, the demand and supply of tissue have continued to grow steadily in China and the United States. At the same time, consumer demand for household paper has exceeded its basic functional requirements and has put forward multi-functional, differentiated, and segmented needs, such as: ultra-soft tissue products, apply cream tissue products, and infant care tissue products, etc.

"In the foreseeable future, the United States will still be the main consumer area of household paper. China has a large population base and great consumption potential, and will become one of the major production and consumption areas of household paper in the world."

**Goda:** "In China, some financially-struggling manufacturers are trying to avoid cost competition and focus on producing more profitable, high value added products to differentiate themselves from their competitors' products. While premium bulky products are being supplied to the market, tissue

products are becoming lower basis weight, and demand for wet toilet paper is increasing, resulting in a diversification of product applications. Thus, we expect the Chinese household paper market to continue to grow steadily, although it will change from the rapid growth it has been experiencing to stable growth."

**Simoncini:** "In general terms, global tissue consumption accelerated in 2022, but at a lower rate (2.6%) than the average growth rate of the past 20 years. Focusing on the two global tissue leaders, China and North America, we observed that China is keeping up the very high growth rates of consumption it had in recent years, and it is de facto driving global tissue demand. At the same time, there's the long-standing issue of overcapacity and the low operation rating of tissue machines.

"In North America, the tissue market stagnated like in Western Europe, showing low growth levels. The market as a whole is faced with the need to upgrade its technology and increase its efficiency. This represents an attractive opportunity for Toscotec because we also specialise in highly customised rebuilds for energy efficiency, of which we are leaders in Europe.

"Going forward until the beginning of the next decade, China is expected to be the fastest growing market followed by North and Middle East, Africa, and Latin America. These are all markets where Toscotec is establishing an increasingly stronger presence. In China, we target the market share reserved to new products of texturised and structured tissue. In America, we expect an increasing environmental awareness to drive a growing interest for technological solutions designed for energy savings."

**Lahti-Samuelsson:** "Both China and America are currently focusing on cost efficiency, i.e., optimising operational cost and energy consumption. In America, there is an increasing interest in revitalising the existing machine fleet with smart solutions. The drive to meet changes between segments, private label vs branded products are also impacting tissue manufacturers in America. In China the awakening demand for higher tissue qualities seems to remain in 2024 and beyond. The hybrid technologies are good tools to produce premium quality tissue in a more sustainable way.

"Legislations and thus cost development for energy, fibre, and emissions will also set the path for the development trend.

"The world is of course in a precarious situation where the geopolitical situation is extremely hard to predict and thus also how the industry will change and in what pace. One thing that is sure is that we need to think flexibility, efficiency, sustainability, and user-friendliness in the solutions we deliver to adapt to the volatile market."

# INFLATION APPEARS TO BE REDUCING IN MOST DEVELOPED NATIONS – COULD WE BE ON THE CUSP OF A BRIGHTER ECONOMIC PERIOD FOLLOWING YEARS OF STAGFLATION?



As pricing shows signs of normalising in the coming months, Consumer Markets Analyst Simon Creasey looks at how manufacturers handled the dilemma of absorbing cost increases or increasing prices.

Last year was a rollercoaster ride for tissue manufacturers. Rampant inflation globally and a resulting consumer cost of living crisis impacted operations and margins. However, in many countries in recent months inflation has fallen from double digit highs to low single figures, and it is anticipated this trend will continue through 2024.

So how badly affected have tissue manufacturers been, and what impact did it have on consumer purchasing habits? A distinctive difference during this inflationary period was the many different factors at play. From sky high energy prices for European manufacturers, caused in large part by the war in Ukraine, through to major price hikes for raw materials and the escalating cost of labour – it was a perfect storm that wreaked havoc with the margins of many manufacturers.

As Laure Miribel, Deputy Chief Executive of France's MP hygiene, explains: "The strong price increase of raw materials (pulp) and energy has impacted us (paper manufacturers) a lot. We have had to redesign some products and dispensing systems in order to reduce as much as we could the consumption and find solutions to help our clients during this period."

It was a similar situation at UK-based Poppies Europe, according to Sales Director John Fearn: "Inflation has been a factor in record high tissue

pricing, as a business this has had a significant impact in how we have had to manage our customer base. With tissues price increases becoming a regular concern and due to being an independent convertor we had to revisit our cost base regularly."

Manufacturers were able to absorb some of these costs, but given how high and how rapidly the cost of some goods and services rose, many companies have had to closely scrutinise their operations.

"It would have been impossible to fully absorb such cost increases without increasing the prices of our finished goods," explains Miribel. "We have therefore decided to both absorb part of the increase and therefore lose some profitability and review our pricing strategy."

For some manufacturers the decision as to whether or not to absorb soaring costs or pass them on in the form of price rises was a more straightforward equation. As Pau Vila, General Manager of Spain's L.C. Paper, says: "In terms of the parent reels business, most of the pulp cost increases and energy cost increases are immediately passed to the customers since the selling unit is tons of tissue, so there is no room for changes in the selling unit to compensate for those cost increases – that would go directly against the margin of the producers, which is already very low due to the past challenges in terms of costs."

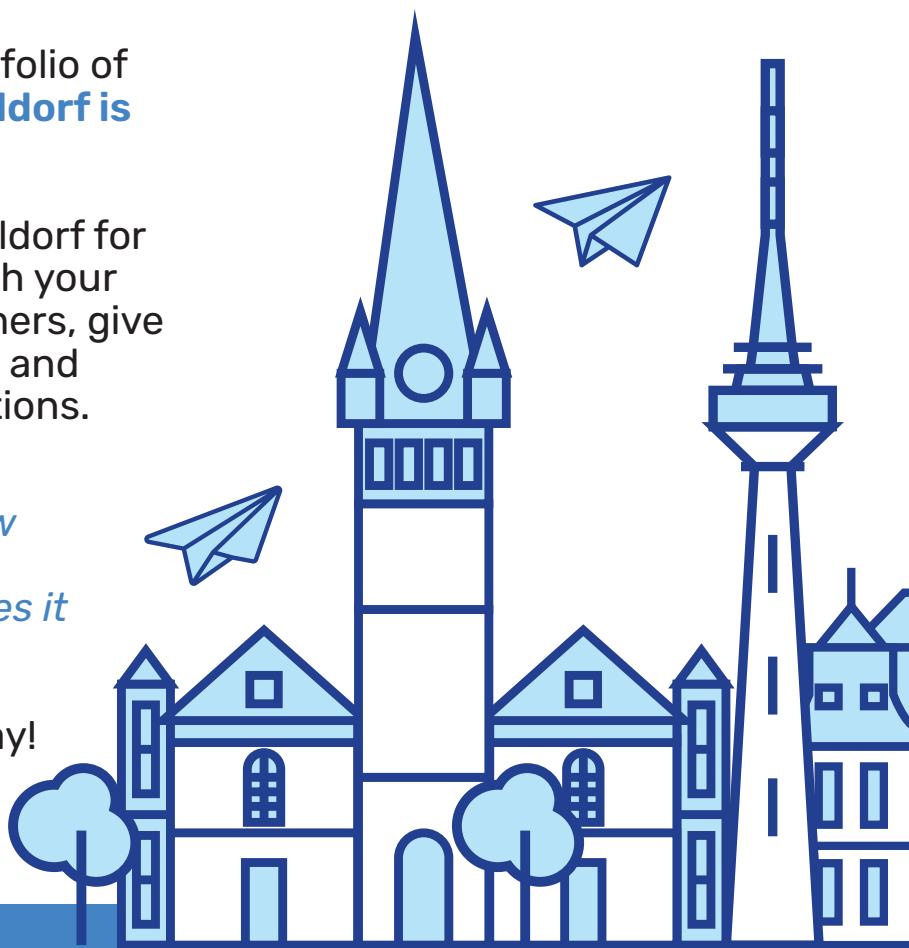
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"However, in the area of finished products (converted), things are different: the selling unit is not a ton or a kg of tissue but rather a roll of tissue – either a toilet roll, a hand towel roll, etc. – which means that there are multiple vectors to adjust and compensate the cost fluctuations including a change in the roll length, a change in the sheet size, a change in thickness (gsm), a change in composition (switch from pure pulp to recycled) or even modifications of the roll count in each package.

"All of those elements which could fall into the definition of 'shrinkflation' have been consistently adopted by most converters, usually in the scope of an open discussion with each customer to find the balance between cost increases and product modifications to mitigate those cost increases."

At Poppies Europe, the company's main area of focus when it comes to keeping costs under control has been increasing its production efficiency by investing in systems and in its people.

"We have identified and addressed areas within our business that can be improved and within the last year we have implemented a plan which has already worked in improving our overall production efficiency," says Fearn. "The efficiency measures are part of our long-term goal to help future proof the business and we are always looking at possible investments in tissue machines to have total control over our supply chain."

While keeping control of supply chains and costs remains within the purview of tissue manufacturers, what is outside of their control is how consumers respond to the rising cost of goods on retailers' shelves. The impact of these price hikes has been pretty stark, according to Vila.

"We have seen a quicker degradation of sales in premium products in contrast of a steady rate of sales for budget products, or even a growth of the latter," he explains. "Some non-essential product categories have suffered a certain degree of demand destruction, which is the case of hand towel rolls in AfH, which can be replaced by hot air blowers, or facial tissues, which can be replaced by toilet paper."

In the UK market in particular, consumers searching for products that offer a better value for money proposition has boosted sales of private/own label products, which are typically cheaper than branded alternatives. According to The Grocer's annual Top Products Survey 2023 which was published in December 2023, volume sales of branded kitchen roll in the UK fell by a whopping 12.5%, whereas own label sales edged up 0.2%. It was a similar story in facial tissues, with branded volumes down 2.4%, whilst own label volumes rose 7.2%.

Interestingly, when it comes to toilet paper The Grocer's data shows branded volumes increased 4% compared with an own label decline of 3%. The magazine attributed this to price cutting by some

branded operators, who reduced prices to lower than that of own label equivalents, which resulted in significant growth for brands such as Nicky and Little Duck. What is also counter-intuitive to discover during the worst cost of living crisis in recent memory is some premium products also fared well over the last 12 months.

"[Due to] UK consumer spending habits in the tabletop sector we are seeing a shift to our more premium offering such as the Tablin/Airlaid napkins we produce which is a disposable alternative to linen," says Fearn. "This was quite surprising as the feeling was due to the inflation pressures business would look to trade down to a lower value product. Although the thought is that when the consumer is going out to eat, they are looking for quality when spending money and something that they feel they are getting value from. Trend data shows UK consumers are going out less frequently but spending more when they do."

While the economic picture may look mixed for 2024, with economies such as Germany and the UK teetering on the brink of recession, the good news is that inflation appears to be under control and pricing should show some signs of normalising in the coming months. The price of some items has already corrected. For instance, last year manufacturers saw a dramatic decline in input costs for some raw materials, which had skyrocketed during 2022.

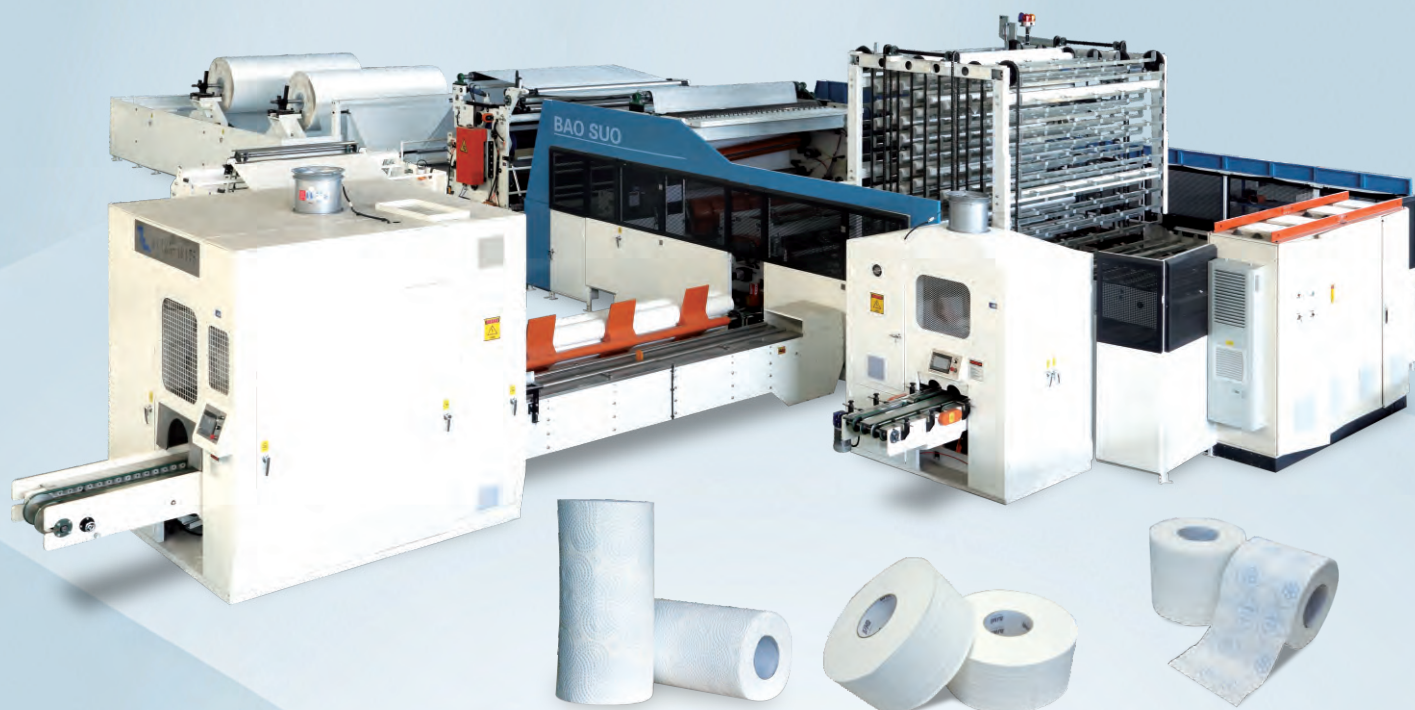
"The wood pulp cost suffered a huge increase during the year 2022 which led to record high prices of up to 1.900 €/t for tissue parent reels in Europe, which was followed by a sharp decrease in wood pulp costs from January 2023 to June 2023 of up to – 50%," says Vila. "That is due to supply and demand mis-adjustments and does not follow the general inflation evolution of the European economies. As a result, tissue paper – and paper in general – has seen a decrease in prices in 2023 while other categories were suffering price increases due to the inflation."

It's anticipated the downward trend in pricing for many materials and other input costs, such as energy, will continue over the coming months. There is also a growing opportunity for manufacturers to capitalise on increased consumer demand for eco-friendly/sustainable products as many shoppers who purchase these types of products are not so price sensitive, mainly because the driving factor behind their purchasing decision is not price, but the environment.

At the moment, it is far too early to say with any certainty how 2024 will pan out – especially if there is another black swan event such as a war. The only thing that looks certain at this point is inflation appears to be reducing in most developed nations, which suggests we could be on the cusp of a brighter economic period following a lengthy period of stagflation



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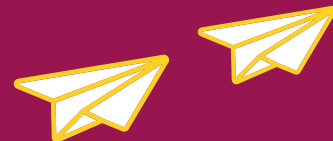
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