

# Tissue World

## Magazine

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## PORTUGAL

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Cover image: Some 25% of Portugal's tissue production is exported internationally, enhancing the country's reputation as a competitive producer across Europe.

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## Portugal: still room for growth in a highly mature market of innovation pioneers

Helen Morris, Senior Editor, Tissue World Magazine

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Premiumisation is key for Portugal's tissue producers. Distinctive products, marketing, pricing and delivery are all incentives for consumers. Emerging from the 2009 recession and the pandemic, key indicators show steady uplift: retail value sales up 3% with 4% projected, with bathroom tissue best performing at 4%. Income levels are expected to sustain increasing consumption, and room for growth is there even as a mature market. Per capita consumption tends to be lower than in countries to the north.

Internationally, 25% of tissue production is exported – three times higher than imports - enhancing Portugal's reputation as a competitive producer across Europe.

The search for distinction is intense. TWM's *Country Reports* and *Operations Report* outline the strategies.

### WEST AND EAST – TWO TRADE BLOCS EACH WITH ITS OWN RULES AND NETWORKS

The West, driven by the US and its allies, and the East, driven by China and its allies, who in both cases are defined by a changing set of affiliations, not just economic, but increasing by cultural and political affinity.

This new global trade reality in the aftermath of President Trump's tariff regime is projected by leading geopolitical analyst Dr Antonia Colibășanu in *MarketIssues*.

Under the broad heading of 'friend-shoring,' countries will be less inclined to deal with others not sharing the same beliefs. The global economy is de-structuring rather than restructuring under frantic renegotiation of established deals. Self-interest is prioritised.

For its part, US deals are designed to "explicitly encourage US-bound investment ... to 'build where you sell.'"

China is deepening trade links with nations not aligned with the US, such as Russia and Belt and Road Initiative partners, ASEAN countries, Africa and Latin America. UploadDe-structuring could include trade wars, by some measures regarded as self-defeating. Dr Colibășanu uses the phrase only once, in relation to the US and Mexico. Globally, she maintains that in time the disruption will settle, presenting a "unique opportunity for all players ... to become creative in placing their own interests first."

At the time of writing, a US appeals court has ruled that Trump's tariffs, imposed on most countries around the world as well as others slapped on China, Mexico and Canada, are beyond his mandate. The ruling will not take effect until 14 October.

### ARE KEY PERFORMANCE INDICATORS A WASTE OF TIME AND MONEY?

If you cannot measure it, you cannot manage it. Statistics look impressive in reports, but if measurements are not fed into the system to improve performance they amount to a waste of precious resources. AFRY Management Consulting's report in *ExitIssues* says too many companies are falling into this trap.

# TRUMP'S TARIFFS POLICY PRESENTS A "UNIQUE OPPORTUNITY FOR ALL PLAYERS ON THE GLOBAL STAGE TO BECOME CREATIVE IN PLACING THEIR OWN INTERESTS FIRST"



Leading geopolitical analyst Dr Antonia Colibășanu examines the deeper socio-economic and security challenges and opportunities now facing nations and their traditional trading networks.

**T**he global economy is currently in a state of de-structuring rather than restructuring. US President Donald Trump's wide-ranging programme of tariff increases has meant often frantic renegotiation of trade deals forcing nations to reconsider their national interests and priorities.

On 2 April 2025 ("Liberation Day"), US President Donald Trump declared a 10% across-the-board tariff on imports from all countries, targeting around 60 nations/blocs with whom the US had large trade deficits. A week later, the administration paused the full tariff increase for 90 days (leaving the 10% base in effect) to allow negotiations. Since then, a flurry of trade deals and negotiations has unfolded as the US seeks bilateral agreements to avert steeper tariffs. As they started to unfold, the global system as we know it ceased to exist.

These discussions are no longer solely about economic growth but are deeply intertwined with internal socio-economic stability and national security concerns. Each country is evaluating its strategic position based on its regional stance, critical

infrastructure, and security needs, often without a clear, unified vision for the future.

The result is a fragmented approach to economic and security relations, where global and regional objectives do not align in any coherent way. At the time of writing the tariff programme is far from settled, its unpredictability diametrically opposed to secure trade.

## THE CURRENT STATUS OF TRADE DEALING

This period of uncertainty and flux presents a unique opportunity for all players on the global stage to become creative in placing their own interests first.

This newfound autonomy allows countries to innovate in how they approach trade, diplomacy, and alliances, seeking more favourable terms or forging new partnerships.

However, as each player jockey for position, this decentralisation inevitably leads to rising tension within the system. This tension is an inherent feature of the ongoing transition—an indication that while new possibilities are emerging, the process of navigating this shifting landscape will not be smooth.

## GLOBAL ECONOMIC IMPLICATIONS OF UKRAINE PEACE TALKS

**The global economic impact of current ceasefire or peace negotiations in Ukraine remains limited. Restructuring was underway well before the war:** the U.S. debated decoupling from China, the EU emphasised de-risking, and Russia sought to pivot away from Europe prior to 2020, with the pandemic accelerating these shifts. The war has reinforced, rather than created, these dynamics. US trade policy, always linked to security objectives, now plays an even more visible role as Washington aligns trade with broader strategic and security priorities.

### Key implications:

**Risks if talks fail:** A collapse of negotiations and renewed Russian offensives could prompt U.S. secondary sanctions on China, stalling trade talks despite Washington's long-term interest in stable ties with Beijing. India, under U.S. pressure

for its relations with Russia, could nonetheless gain renewed importance as Washington seeks partners to balance China.

**Global economic warfare:** Since 2022, Russia has disrupted Black Sea shipping, reshaping global shipping and insurance markets. These changes—and the parallel drive to build alternative trade routes, alliances, and corridors—are likely permanent, ensuring continued economic competition with the West regardless of any peace deal.

**Postwar adjustments:** Even if a settlement is reached, Russia–West trade would resume only gradually and depend on the condition of Russia's economy. Ukraine's reconstruction will unfold in stages and remain closely tied to domestic conflict management and political stability.

For further perspectives on these developments, refer to the work of Antonia Colibasanu / [www.colibasanu.ro](http://www.colibasanu.ro)

This shifting dynamic makes it crucial for the business community to closely monitor the evolution of trade deals, as these renegotiations can significantly impact global markets. Companies must remain agile, not only to understand the immediate effects of new agreements but also to anticipate how these deals may reshape investment patterns and critical supply chains. As national priorities shift and new regional alliances form, businesses will need to adapt their strategies to navigate an increasingly fragmented and unpredictable economic landscape.

To help navigate this evolving landscape, here is a summary of where we stood at the time of writing with each trade deal that the US has started negotiating since April.

- **UNITED KINGDOM:** The US and the UK are negotiating the Economic Prosperity Deal, which aims to strengthen trade between the two nations while addressing specific bilateral irritants. The deal focuses on agriculture, with the UK opening its market to more American beef, ethanol, and other farm products. It also targets automobiles, aerospace goods, and metals, such as steel and aluminium. The US has set a special tariff-rate quota for UK steel/aluminium exports and capped tariffs on UK-made autos at 10% for the first 100,000 vehicles, beyond which a 25% Section 232 auto tariff applies. This agreement seeks to bolster supply chain security and US manufacturing, giving American farmers and producers greater access to UK markets while offering the UK some tariff relief. The deal, initially announced on May 8, 2025, is still in the process of ratification on the UK side, with further negotiations ongoing, particularly concerning pharmaceuticals and long-term quotas. While it solidifies the US-UK partnership, challenges remain, including

political opposition in both countries and the incomplete scope of the agreement, particularly concerning tariff reductions and specific sector negotiations. Without finalising these details, including the outcome of the US Section 232 investigation on pharmaceuticals, full ratification may face delays.

- **EUROPEAN UNION:** The US and the EU are negotiating the Turnberry Framework Agreement, a trade deal aimed at reducing trade tensions and reshaping the transatlantic economic relationship. Under this framework, US tariffs on EU automobiles and pharmaceuticals will be capped at 15%, averting a previously threatened 30% tariff. Some goods, like aircraft, medicines, and select agricultural products, will see tariffs eliminated entirely. The deal also has the EU purchasing military technology and \$750bn worth of US energy exports over three years, aiming to reduce its reliance on Russian energy, as well as a promise for investment in the US critical infrastructure. However, unresolved issues remain, including 50% US tariffs on EU steel and aluminium and the treatment of semiconductors and pharmaceuticals, which are still under investigation. The framework, announced in late July 2025, aims for full ratification by the end of the year, but many details are still to be ironed out. Politically, the agreement has faced backlash in Europe, with some leaders viewing it as a concession to US demands, while others worry about its economic impact, particularly the tariffs on key industries. Despite these challenges, the deal marks an effort to realign US-EU economic ties amidst growing competition with China and Russia.

**The US and India seem to remain in the process of negotiating a comprehensive bilateral trade agreement, covering sectors such as agriculture, manufacturing, digital trade, and pharmaceuticals.**

agricultural products, industrial goods, and digital services. Indonesia also agreed to remove non-tariff barriers, such as import licensing and local content rules. The deal is designed to strengthen economic ties between the two nations, with a focus on enhancing US supply chain resilience, particularly in critical minerals. For Indonesia, the objective is to avoid a 46% reciprocal tariff while attracting US investment. The deal is seen as a step towards reducing US dependence on China and integrating Indonesia into the US-led trade framework. The agreement's success will depend on Indonesia's ability to implement sweeping reforms and ensure that regulatory changes are enforced.

- **JAPAN:** The US and Japan have reached the Reciprocal Trade Framework, which aims to address key economic concerns and solidify their alliance. The US has set a 15% tariff on Japanese imports, down from the previously threatened 25%, with Japan agreeing to lower barriers on US automobile exports and agricultural products like rice. In return, Japan has pledged to invest \$550bn in the US, particularly in high-tech manufacturing sectors such as semiconductors and electric vehicle supply chains. The agreement seeks to reduce the US-Japan trade deficit, strengthen manufacturing, and bolster US security by ensuring Japan's contribution to critical industries. Japan's objectives are to avoid the higher 25% tariff on autos and maintain stable access to the US market, while also reinforcing its security alliance with the US in the face of regional threats. The deal, announced in July 2025, is considered a framework, with further negotiations needed to finalise provisions on sectors like automobiles and ensure the \$550bn investment materialises. However, the deal faces challenges, as both countries will need to manage internal political resistance and ensure that the deal's terms are adhered to in the coming months.
- **INDONESIA:** The US and Indonesia reached a landmark trade deal that opens nearly all of Indonesia's markets to US goods and services while imposing a 19% tariff on Indonesian exports to the US. In exchange, Indonesia will eliminate tariffs on over 99% of US goods, including
- **VIETNAM:** In July 2025, the US and Vietnam reached a deal in which Vietnam's imports to the US will face a 20% tariff, much lower than the 46% initially threatened. In exchange, Vietnam agreed to remove its tariff and non-tariff barriers on US goods, giving US agricultural products, machinery, and technology duty-free access to Vietnam's market. This deal is part of the US's broader strategy to reduce its trade deficit with Vietnam, integrate Vietnam into the US-led economic sphere, and secure a supply chain alternative to China. Vietnam's objectives were to avoid the severe 46% tariff and maintain stable access to the US market, while also attracting US investment. Both sides must navigate challenges in enforcement and compliance with non-tariff commitments, with the potential for ongoing talks in late 2025 or early 2026 to formalise the agreement further.
- **INDIA:** The US and India seem to remain in the process of negotiating a comprehensive bilateral trade agreement, covering sectors such as agriculture, manufacturing, digital trade, and pharmaceuticals. The US has been pushing for greater market access, particularly in farm goods, medical devices, and technology products, while India seeks to avoid steep tariffs on its major exports like textiles, IT services, and pharmaceuticals. A major challenge is India's reluctance to open its agriculture and dairy markets, where it faces strong domestic opposition. Both countries share a strategic interest in reshoring critical supply chains and reducing dependence on China. At the same time, President Trump announced on 30 July that the US would impose a 25% tariff on all imports from India and "penalties" for India buying "a vast majority" of Russian military equipment and energy. At the time of writing, there is no clarity on what kind of penalties may be put on India, but it is the first time that a negotiated deal is directly tied to the Russian

war in Ukraine. Otherwise, as of late July 2025, negotiations were ongoing, with a target date for a final agreement set for October 2025.

- **CANADA:** The US and Canada, already partners under the USMCA, are renegotiating aspects of their trade relationship, with Trump threatening to impose tariffs up to 35% on Canadian goods unless a deal is reached. This negotiation primarily focuses on sectors like automobiles, metals, agriculture (particularly dairy), and digital services. Canada aims to preserve tariff-free access to the US market and secure stability in trade relations, while the US seeks to rebalance trade and address perceived issues of non-compliance with the USMCA (most goods protected under USMCA are understood to remain protected and not become subject of higher tariffs). A significant challenge is balancing Trump's protectionist demands with the desire to maintain strong trade ties and avoid economic disruptions in key sectors like autos and energy. The talks are expected to continue through 2025, with a potential resolution tied to the 2026 USMCA review.
- **BRAZIL:** The US–Brazil trade negotiations have reached a critical impasse following the Trump administration's decision to impose steep tariffs on Brazilian imports. Initially sparked by a 10% tariff in April 2025 under Section 301, the situation escalated sharply in July when President Trump announced a 50% tariff on most Brazilian exports, citing the prosecution of former President Jair Bolsonaro as a motivating factor. Despite Brazil's repeated diplomatic overtures – including a formal proposal in May and multiple high-level communications – the US has not responded substantively. Washington's key interests include protecting politically aligned actors, reducing dependence on non-strategic suppliers, and securing preferential access to Brazilian commodities like copper, which is vital for US defence and energy industries.
- Brazil, by contrast, seeks to preserve judicial independence, defend its sovereign legal processes, and maintain open access to the US market for its agricultural and industrial exports. While some sectors like aircraft and energy have been exempted, the broader tariff package is set to take effect on August 6, with no agreement in sight. The episode marks a serious deterioration in US – Brazil relations, blending trade retaliation with political pressure in an increasingly tense geopolitical climate.
- **MEXICO:** Mexico, a key USMCA partner, is facing the threat of 30% tariffs on its exports unless it agrees to US demands regarding intellectual property, energy policies, and trade practices. The US has focused on pressing Mexico to strengthen intellectual property protections and allow greater access to its energy markets for US firms. Mexico, in turn, is looking to avoid the crippling tariffs, which would devastate its export-driven economy. Negotiations were ongoing with potential interim agreements expected as the August 1 deadline loomed. Both countries are working to address longstanding issues such as labour rights, agricultural trade, and energy reforms, with the ultimate goal of stabilising the trade relationship and preventing a trade war.
- **SOUTH KOREA:** South Korea is negotiating with the US to prevent the imposition of 25% tariffs on its goods. The ongoing talks are focused on several sectors, including shipbuilding, automobiles, steel, electronics, and agriculture. South Korea is seeking to secure a tariff rate similar to Japan's (15%), while also addressing issues like digital trade and non-tariff barriers. A key goal for the US is to strengthen economic cooperation in critical industries, particularly in shipbuilding and semiconductors, while South Korea aims to preserve its competitive position in the US market and avoid significant economic damage. A framework deal with pending negotiations on particular details and sectors is expected in August.
- **CHINA:** The US and China are engaged in extended trade talks, with the threat of 30% tariffs on Chinese goods looming. The US seeks to reduce its massive trade deficit with China, secure better intellectual property protections, and address issues like technology transfer and market access. For China, the objective is to prevent further escalation of tariffs and secure relief from the punitive measures. Both countries are negotiating a deal that will balance economic interests with broader geopolitical concerns, particularly in technology and supply chains. The deadline for a deal was set for August 12, 2025, though ongoing talks suggest the timeline may be extended into late 2025 or 2026. Some of the deal discussions will likely tie into the support China has had for Russian war in Ukraine. However, the major challenge for this deal remains ensuring compliance with any agreed-upon terms, especially in sectors like semiconductors and rare earth materials.
- **TAIWAN, CHINA:** The US and Taiwan are negotiating to avoid the 32% tariff that Trump announced on Taiwanese imports, particularly impacting semiconductors and electronics.

Taiwan aims to secure a favourable trade deal that deepens its economic ties with the US and provides market access for its key exports. For the US, the goal is to ensure a stable supply of critical semiconductors and reduce the trade deficit with Taiwan. The talks are likely to focus on market access, IP protection, and supply chain cooperation, with a specific focus on Taiwan's semiconductor industry. The geopolitical sensitivity of Taiwan's status means the trade agreement will likely remain informal, with efforts to avoid provoking China while securing mutual economic benefits. Talks are ongoing, with a potential deal to be formalized by late 2025.

A common feature across all the trade deals that the US has started discussing and negotiating is that they are still in the framework stage. This means that while broad agreements and terms have been outlined, many of the specific details are still being worked out. These deals are essentially laying down the foundation for future negotiations, which will further define the exact terms, tariffs, sectoral commitments, and enforcement mechanisms.

As the discussions continue, these frameworks are expected to evolve and adapt, with the final agreements taking shape through ongoing dialogues. Therefore, while progress is being made, the outcomes remain fluid, and key aspects will be refined in the coming months as the involved parties seek to address remaining issues and align their national interests.

### IMPACT ON FOREIGN DIRECT INVESTMENT (FDI) FLOWS

**These deals are essentially laying down the foundation for future negotiations, which will further define the exact terms, tariffs, sectoral commitments, and enforcement mechanisms.**

Many of these trade deals explicitly encourage US-bound investment. These commitments signal a clear trend: current US economic policy is increasingly favouring foreign multinationals that are accelerating plans to establish production capacity in the US to "build where you sell." Higher US tariffs are incentivising companies to produce within the American market rather than exporting from abroad.

This shift is expected to drive increased foreign direct investment in US manufacturing, particularly in sectors like autos, batteries, and semiconductors – industries targeted by tariffs and bolstered by US industrial policies such as subsidies from the 2022 CHIPS Act and the Inflation Reduction Act. While various sectors are seeing this influx of investment, certain industries highlight the focus of US policy on strengthening its critical infrastructure using foreign direct investment. For example, shipbuilding could become an FDI beneficiary, as South Korea's proposed partnership may lead to Korean shipyards investing in US facilities, injecting foreign capital and expertise into the sector. Similarly, aerospace and defence companies from the UK and EU may increase investments in US production to comply with "Buy American" requirements and avoid tariffs on aircraft and steel/aluminium.

The new trade environment is accelerating the shift of capital away from China to more favourable locations. With steep US tariffs on Chinese goods looming, companies are avoiding new investments in China for export production and redirecting FDI to countries with better trade terms or directly to the US Southeast Asian nations, like Vietnam and Indonesia, are becoming attractive for supply chains feeding the US due to lower tariffs or duty-free access.

India could also see a surge in US FDI if its trade deal is finalised by October. In contrast, investment in China is likely to decline as tariffs and US policies restrict capital flows, while China's focus on self-reliance and domestic market growth reduces incoming FDI. Western firms may invest in China for domestic markets but will move export-oriented investments to friendlier countries.

Countries that secure trade deals with the US are becoming key destinations for both US and third-country investments, driven by the friendshoring trend. For example, despite ongoing friction, Mexico and Canada remain vital for US supply chains, attracting investment from Asia and Europe to serve the US tariff-free under USMCA, provided they navigate new rules from current talks. While uncertainties in US-Canada/Mexico negotiations may temporarily dampen FDI in North America, once settled, North America's integrated supply chains and proximity will continue to make it an attractive bloc. Southeast Asia (Vietnam, Indonesia, Thailand, Philippines, Malaysia) will continue to benefit from relatively low labour

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costs and improved US market access, drawing significant FDI.

In contrast, Europe may adopt a more defensive FDI stance: European firms may increase investments in the US, but US and foreign firms might pause investments in Europe if trade remains burdened by a baseline 15% tariff, opting instead to invest in the US to access both markets. However, the EU's strategy could involve diversifying outward investment to regions like Latin America, India or ASEAN, where new deals are in place. Taiwan, facing increased geopolitical and tariff risks, is incentivised to invest in the US, exemplified by TSMC's US fab investment.

South Korea and Japan, having secured favourable terms, are also ramping up investments in the US across sectors like batteries, semiconductors, and vehicle assembly, aligning with both market and alliance priorities. At the same time, with many allied countries eliminating tariffs on US exports – such as the UK, EU (on some items), Indonesia, Vietnam and others – all agreeing to zero tariffs for US goods, it would become easier for US firms to export directly from the US rather than invest abroad to bypass trade barriers. However, it all depends on the sector and the product traded. This is why some US outward FDI will still flow into these allied countries to build supply chain components and take advantage of favourable rules of origin under new trade agreements.

At the same time, this redesign of global investment flows and supply chains will take into account existing dependencies. Transition periods will vary depending on the criticality of certain resources from non-allied partners or how secure it is to shift supply chains. Countries with critical resources or established, secure supply chains that are not yet part of the trusted network may present challenges in adjusting, requiring careful balancing between economic interests and geopolitical security. This transition will likely involve phased shifts, with investments in alternative sources or partners increasing over time as companies assess both the risks and the feasibility of switching supply chain routes. The overarching trend in the western world (or the non-Global South world) is a rebalancing of FDI flows toward the US and its allies, moving away from China-centric networks, and reinforcing the broader strategy of “de-risking” from adversaries while building industrial capacity among trusted partners.

## THE RECONFIGURATION OF GLOBAL SUPPLY CHAINS IN CRITICAL SECTORS

More importantly, the new trade landscape – tariffs on adversaries, deals with allies – is driving a profound reconfiguration of supply chains, especially in semiconductors, green tech, pharmaceuticals, and rare earth/critical minerals ... and green tech.

Supply chains for green technologies – particularly electric vehicle batteries, solar panels, and wind turbines – are, in theory, if all deals keep an US-centric approach, shifting toward North America and allied nations to reduce reliance on China, which dominates the battery and solar industries.

Over time, these changes will diversify clean tech supply chains for the US, with mining occurring in allied countries, processing either domestically or in allied regions, and assembly in the US or allied hubs. This shift breaks the previously China-centric supply chain. The EU is aiming to achieve similar goals. If the ongoing negotiations from the framework deal concluded on July 27 continue to define areas of collaboration, the new clean tech supply chain network could be largely driven by US-EU coordination.

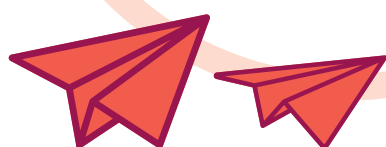
## TWO DISTINCT YET INTERCONNECTED GLOBAL SUPPLY NETWORKS

While the transformations and effects of new trade deals between the US and third countries will clearly shape the global system, these changes will unfold in stages, with a focus on the short and medium-term impacts. Right now, we are witnessing the early signs of “destructuring” in the short term, where existing supply chains are being fragmented or rerouted due to tariff changes and geopolitical tensions. However, as companies adapt and implement their own coping mechanisms, clear patterns of reorganisation are beginning to emerge. These patterns reflect the emerging trend of bifurcation and regionalisation of supply chains across various sectors.

In particular, the overarching trend is that countries aligned with the US are forming a more integrated, secure network for trade, while nations in the China-centric bloc are reinforcing their own supply chains, prioritising self-reliance and alternative markets. Over time, as businesses stabilise their operations in response to these shifts, the short-term disruptions will give way to more resilient, strategic supply chains tailored to their changing risk environments. This dynamic process will significantly reshape global trade flows, with the alignment of both policy and investment decisions playing a critical role in how these new supply networks take form.

A US-centric network of allies is emerging, including North America, Europe, developed Asia, and emerging economies like Vietnam, India, and Indonesia. Given the goals outlined in current negotiations, it's likely that these countries will trade more freely with each other under new bilateral agreements and common standards, further reducing their reliance on China. This network is centred on security and resilience, with redundant capacity built across multiple regions, such as fab plants and EV battery factories outside of China, to mitigate risks. Supply chains within this network will prioritise security, with critical inputs sourced from multiple allies and key minerals stockpiled or sourced from friendly

**As the US negotiates new trade deals, it is also applying cautious pressure on Russia, a strategy that is causing tension within its own alliances.**



nations. This trend is actively shaping the future of manufacturing and resource extraction, as companies seek to minimise exposure to geopolitical volatility and tariff risks.

Meanwhile, a China-centric network is deepening its trade with nations not aligned with the US, such as Russia and Belt and Road Initiative partners, while focusing on self-reliance. China is diversifying its trade routes, strengthening ties with the Global South, reducing dollar dependence, and investing heavily in domestic tech R&D. Evidence of this shift includes China courting markets in ASEAN, Africa, and Latin America, and fostering indigenous innovation in key sectors like chips and batteries to break western control. This strategy may lead to parallel supply chains, with China focusing on local EV supply chains using domestic inputs for developing countries, while western supply chains use non-Chinese materials for markets in the US and EU. As a result, we're seeing a reorganisation of global supply networks into two distinct, yet interconnected, blocs, each with its own set of trade relationships and dependencies.

While complete disentanglement is challenging and some neutral players may trade with both blocs, these trade deals are accelerating the re-routing of supply chains to prioritise security, with goods critical to national security or economic stability sourced from the US and its allies rather than strategic rivals.

As the US negotiates new trade deals, it is also applying cautious pressure on Russia, a strategy that is causing tension within its own alliances. The EU is frustrated by the US's hesitancy to push Russia more aggressively, as European nations are closer to the conflict and have faced direct consequences of Russia's actions. On the other hand, China is displeased by the US's strategic manoeuvring, viewing

it as a broader effort to reshape the Eurasian power play and even reduce Beijing's influence in global affairs. These trade negotiations are intricately linked to the ongoing war in Ukraine, with the fate of the conflict and the future of the region intertwined with how the global system reconfigures. The longer-term geopolitical challenges – such as ensuring peace in Ukraine and the eventual reconstruction of both Ukraine and potentially Russia and its role in the global economy – will be shaped by the outcomes of these deals. The future of the global order, including how nations approach economic cooperation and security, will significantly impact the ability to manage these complex post-war realities.

In summary, global supply chains are becoming more segmented and alliance-focused. Critical sectors are seeing production clusters within friendly nations, ensuring continuity amid tariffs and geopolitical risks. Efficiency and cost considerations, which once favoured production in China, are now being tempered by tariff costs and geopolitical instability, pushing firms to "China-proof" their networks. As these trade deals and tariffs take full effect, we can expect a world where products consumed in the US are increasingly designed and built with components sourced from allied nations, with minimal reliance on China or other strategic rivals. This marks a significant reshaping of the global supply chain map, prioritising security and predictability over efficiency in an increasingly volatile geopolitical environment.

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# NEWS IN BRIEF

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)

## **VPPA PARTNERS WITH TISSUE WORLD FOR HO CHI MINH CITY EXHIBITION AND CONFERENCE LAUNCH; TWO-DAY TRADE SHOW, 50+ EXHIBITORS, 450+ VISITORS**

Tissue World has officially partnered with the Vietnam Pulp and Paper Association (VPPA) – the most influential tissue, pulp and paper association in Vietnam – to introduce its latest global exhibition and conference, taking place in Ho Chi Minh City between 25-26 November 2025. The collaboration is a significant milestone for the Tissue World global exhibition platform and will create an exclusive opportunity for exhibitors, visitors and conference delegates to network at the two-day event, which is all taking place within the 5\* Equatorial Hotel.

It will draw in the Asia-Pacific (APAC) region's

tissue and towel markets – a large portion of the world's most competitive, influential and growth-hungry companies.

Gerry Dunphy, Tissue World Event Director, said: "Our partnership with the VPPA marks a significant milestone as their extensive network and deep market understanding will ensure that Tissue World Ho Chi Minh City delivers exceptional value to all participants while strengthening industry relationships throughout the region.

"We chose Ho Chi Minh City because it is one of Southeast Asia's most dynamic and future-focused business hubs, offering unmatched potential for market expansion and cross-border partnerships."

Luong Chi Hieu, VPPA Chief of Office, said: "We are delighted to partner with Tissue World for the upcoming event in Ho Chi Minh City.



**The exclusive 5\* Equatorial Hotel in Ho Chi Minh City, Vietnam:** the venue will hold Tissue World's latest exhibition & conference, held between 25-26 November 2025

"This collaboration provides a valuable opportunity for VPPA members and the Vietnamese paper industry to connect with international partners, exchange experiences, and explore new opportunities to promote sustainable growth."

### **Exhibit and showcase your business**

The bi-annual Tissue World Ho Chi Minh City event is the latest piece of the Tissue World map. Limited spaces remain available to exhibit. With the support and endorsement of the VPPA, your business has the opportunity to connect directly with Vietnam's most influential industry leaders and key decision-makers.

Apply to exhibit and attend:

<https://www.tissueworld.com/ho-chi-minh-city/tickets-page/>

Enquire to speak at the conference:

<https://show.tissueworld.com/tissue-world-hcm-apply-to-speak>

### **VPPA playing crucial role in industry development**

As Vietnam's most influential pulp and paper association, VPPA represents and advocates for the interests of the country's paper industry. The association plays a crucial role in industry development, policy formation, and international cooperation, supporting sustainable growth across Vietnam's paper manufacturing sector.

### **Tissue World**

Since 1993, Tissue World has been the leading global exhibition and conference platform, and Tissue World Magazine the leading independent trade magazine serving the tissue and towel industry worldwide. As the world's largest dedicated tissue industry trade show representing the whole supply chain, it unites manufacturers, suppliers, distributors, and industry professionals to network, learn, and conduct essential face-to-face business.



**Production boost:** The company said the launch of its TM6 reflects the Kingdom’s “self-sufficiency in tissue products”

## SAUDI ARABIA

### JUTHOR BREAKS GROUND AT SAR345M TISSUE PLANT

Juthor Paper Manufacturing has announced the ground-breaking of its second high-capacity tissue production line – to be supplied by Andritz – in King Abdullah Economic City, near Jeddah.

The ceremony was attended by senior representatives from government and private entities including the Saudi Authority for Industrial Cities and Technology Zones and the Economic Cities and Special Zones Authority, as well as senior leadership from Juthor and parent company Middle East Paper Co. (MEPCO).

Valued at SAR345m, the project (PM6) will increase Juthor’s production capacity 120,000tpy, with the new machine operating at a speed of 2,100mpm. Andritz will supply the machine and install it within 24 months.

Musaab Al-Muhaidib, Chairman of MEPCO, said: “The launch of TM6 reflects our strong confidence in the promising future of Saudi industry.

“Aligned with Vision 2030, this expansion strengthens our role in empowering the local manufacturing ecosystem and enhancing the

Kingdom’s self-sufficiency in tissue products.”

Faisal Haddawi, Chief Executive of MEPCO, added: “At MEPCO, we are committed not only to expanding production capabilities but also to delivering value, building resilience, and fostering trust.

“TM6 will accelerate our sustainable growth strategy and further contribute to the Saudi economy and regional markets.”

Juthor Paper Manufacturing is a subsidiary of MEPCO, one of the largest paper products manufacturers in the MENA region.

## GERMANY

### FRIPA BOOSTS CAPACITY WITH TM INVESTMENT

Fripa Papierfabrik Albert Friedrich has invested in an Andritz-supplied PrimeLine TM S2200 tissue machine to be installed at its mill in Miltenberg.

The machine will have a capacity of 37,000tpy, a design speed of 2,200m/min, and a web width of 2.72m.

# Yankee Coating Solutions

**Light Dry Crepe solutions** help you extract more value from your creping process.

**TAD+ Structured Tissue Yankee Coatings** help you meet the demands of TAD and hybrid structured tissue machines.

## Leverage maximum value creation with Buckman's Yankee coating solutions.

Buckman brings a new level of quality and efficiency to your tissue operation with strong support for your entire Yankee creping operation including problem-solving that leads to a better tissue and more efficient tissue making.

Our LDC solutions can help you achieve a stable creping process that maximizes both production and quality. And our proprietary Yankee coating packages for both TAD and hybrid structured tissue platforms will help you meet today's tissue manufacturing demands.

### Learn more.

Find out all the ways Buckman expertise and innovation can be applied to help your organization extract more value from your Yankee creping process. Contact your Buckman representative or visit [buckman.com](http://buckman.com).



**Buckman**<sup>TM</sup>  
Chemistry, connected.

Start-up is planned for the fourth quarter of 2026.

Christoph Maaß, Head of Paper Production at Fripa, said: "With our new tissue machine, we are investing in a future-ready solution that combines first-class performance with sustainability, helping us to meet both our production goals and environmental responsibilities."

The value of the order will not be disclosed.

Founded in 1911 and family-run in fourth generation, Fripa has been operating an Andritz-supplied tissue machine since 2008.

It supplies customers throughout Europe with high-quality tissue paper, offered as branded and private label products, from its Miltenberg site.

## BALTICS

### INVL BALTIC SEA GROWTH FUND COMPLETES ACQUISITION OF PEHART GROUP

Baltics private equity fund INVL Baltic Sea Growth Fund has completed the acquisition of Pehart Group, a leading producer of household and industrial paper products in Romania.

The consortium of International Finance Corporation (IFC), Banca Transilvania and ING Bank Romania provided an over €150m financing package with a significant sustainable linked component to fund the transaction and further development of Pehart Group.

The transaction with Abris Capital Partners, the independent private equity fund that previously held Pehart Group, was completed on 11 July.

With a 187-year tradition, Pehart Group is one of the largest paper manufacturers in Southeast Europe with a portfolio ranging from toilet paper, paper towels, napkins, and other hygiene paper products to jumbo rolls, used in the converting process into paper products for household and industrial use.

In 2024, Pehart Group strengthened its position on the market through production efficiency and strategic investments, diversifying its product portfolio with new launches such as the SOVIO brand, targeting the AfH sector, and expansion into international markets. In 2024, it reported revenues of €165m.

Vytautas Plunksnis, Partner at INVL Baltic Sea Growth Fund, said: "We are excited to back Pehart Group's management team in bringing the company to the next level, and we will support significant investments into expansion of Pehart's manufacturing capacities and add-on acquisitions in the region strengthening Pehart Group's market leadership and driving its next phase of growth."

Gabriel Stanciu, Chief Executive of Pehart Group, added: "We see this partnership as an opportunity to accelerate our development plans and strengthen

Pehart Group's position as a regional leader in the paper products industry.

"We will continue to invest in cutting edge technologies, diversify our product portfolio and expand our presence in international markets."

### GRIGEO GROUP INVESTS €106M TO DOUBLE TISSUE PRODUCTION

Lithuania's Grigeo Group has invested €106m to install a Toscotec-supplied tissue line and double its tissue production to 140,000tpy.

The bulk of the investment – over €97m – will be used to modernise and expand the UAB Grigeo Tissue production plant in Grigiškės.

A further €9m will be spent upgrading the production and infrastructure of Grigeo Tissue, a tissue paper mill in Poland.

Tomas Jozonis, Chief Executive of Grigeo Group, confirmed the company signed the contract with Toscotec on 23 July.

He said: "The market potential in the Baltics, Scandinavia and Western Europe is growing. The new paper machine alone will produce an additional 70,000 tons of paper per year – a volume that currently requires the combined work of all three machines operated by our group.

"This investment is a strategic step for us and opens a new chapter in Grigeo Group's growth story."

PM7 machine will have a paper web width of 5.6m, a design speed of up to 2,100mpm, and is scheduled to be operational in the first half of 2028.

It will be accompanied by the building of two automatic paper base conversion lines, a pulp warehouse.

Jozonis added: "We are constantly looking for innovative solutions, maintaining our leadership position and looking for the latest, high-end technologies.

"We are buying one of the fastest serial paper machines on the market, and our larger and more efficient production capacity will allow us not only to strengthen our position in strategic markets, but also to offer innovative and resource-efficient products."

Grigeo Group will also invest in paper converting lines. Contracts have been signed with Valmet to supply two new lines, which will be commissioned in Grigiskes next year: one for the B2C and the other for the B2B segment.

Another conversion line for the B2B market is planned for 2027.

The expansion will also include the Grigeo Group's production plant in Poland, which will receive an investment of more than €9m.

The factory will be equipped with a new converting line for paper base and will invest in additional infrastructure.

## GLOBAL

### ESSITY REPORTS Q2 EARNINGS OF SEK4.7BN

Essity has reported organic growth and “sequentially higher margin in a weak economy” in its second quarter results.

Net sales decreased 6.6% to SEK34,185m, while organic sales growth amounted to 1.9%.

Profit for the period, total operations, amounted to SEK3,053m, down from SEK3,333m.

Ulrika Kolsrud, who started her role as the company’s new President and Chief Executive on 1 June, said: “For the second quarter, we achieved a positive organic sales growth and earnings of SEK4.7bn.

“The quarter was dominated by a weak economy and an uncertain external environment, yielding limited volume growth.

“Our stable performance despite challenging market conditions demonstrates the strength of Essity’s broad portfolio of essential solutions for better hygiene and health.”

In Consumer Goods, Incontinence Products Retail and Feminine Care reported strong growth, while the Baby Care market remained challenging with low birth rates and intense competition.

Reduced activity in the hotel and restaurant sector resulted in lower demand in Professional Hygiene and, in the healthcare sector, weaker conditions in certain markets negatively affected sales for Incontinence Products Health Care.

Despite these challenges, Kolsrud said the company “delivered yet another quarter of positive organic sales growth.”

She added that the company’s gross margin improved, both compared to the second quarter of 2024 and sequentially, as higher sales prices offset increased costs of goods sold, including trade tariffs.

“However, the limited volume growth resulted in lower cost coverage, thereby negatively impacting earnings.

“In addition, both net sales and earnings were negatively impacted by currency translation effects.

“Overall, we delivered stable earnings of SEK4.7bn and the EBITA margin excl. IAC continued to improve sequentially.

“We are continuing to accelerate profitable volume growth through marketing campaigns, intensive customer engagement activities and a clear focus on the value segment.

“In parallel, we will need to reduce the company’s cost level and enhance efficiency in all parts of the business.”



**Sequentially higher margins:** “Overall, we delivered stable earnings of SEK4.7bn,” Ulrika Kolsrud, Essity’s President and Chief Executive

### Investments for the future

Kolsrud added the company is working to strengthen its offering across the low-cost – value – premium spectrum to meet the different needs and financial situations of customers and consumers.

One example is the upgrades carried out in Consumer Tissue, Cushelle Simply Soft and Lotus Comfort, which were launched last quarter.

“Aligned with our strategy, we are implementing several initiatives to grow in our most profitable categories in attractive markets.

“We are seeing good effects of several growth initiatives, for example in JOBST Lymphology, Cutimed Advanced Wound Care, TENA Men, Tork PeakServe and Tork Skin Care.”

She added: “By further strengthening our customer and consumer focus, we will continue to develop and increase our competitiveness in order to grow and gain market share.

### K-C REPORTS STRONG RESULTS DRIVEN BY “INNOVATION-LED VOLUME GROWTH”

Kimberly-Clark (K-C) has reported the highest volume growth achieved in five years in its second quarter results\*, driven by resilient consumer demand and innovation-led volume growth.

Net sales for the quarter were \$4.2bn, down 1.6%,

driven primarily by divestitures and business exits and unfavourable currency translation, with organic sales growth of 3.9% versus the prior year.

Reported gross margin was 35%; adjusted gross margin was 36.9%, down 180 basis points versus the prior year.

Second quarter operating profit was \$592m compared to \$539m a year earlier.

Mike Hsu, K-C Chairman and Chief Executive, said: "Our second quarter results are indicative of the exceptional progress we are making executing our Powering Care strategy.

"This was a very active quarter and one of the strongest in our recent history.

"We delivered strong organic sales growth, fuelled by the highest volume growth we've achieved in five years."

For the first half of the year, sales of \$8.2bn decreased 4.0% primarily due to an approximately 3.4% negative impact from a combination of the PPE divestiture and the exit of the company's private label diaper business in the US, as well as an approximately 1.7% negative impact from foreign currency translation.

Organic sales grew 1.2 percent primarily from a 2.3 percent increase in volume, partially offset by price investments of 1.2 percent, while portfolio mix was broadly in line with a year ago.

Year-to-date operating profit was \$1.2bn, including \$196m of costs related to the company's transformation initiative.

Hsu added: "Our durable brands, differentiated value propositions and innovation investments enabled us to enhance and maintain leading market share positions across categories and price tiers.

"We took decisive actions to set Kimberly-Clark up for enhanced, sustainable growth and profitability."

*\*Reported results are based on continuing operations and exclude the International Family Care and Professional ("IFP") business, which is reported as discontinued operations.*

## SHAILESH JEJURIKAR ELECTED P&G PRESIDENT AND CEO; JON MOELLER TO BECOME EXECUTIVE CHAIRMAN

The Procter & Gamble Company (P&G) has appointed Shailesh Jejurikar, currently Chief Operating Officer, as Procter & Gamble's President and Chief Executive.

Effective 1 January 2026, he will succeed Jon Moeller, who will become the company's Executive Chairman.

Joe Jimenez, Lead Director of P&G's Board, said: "Shailesh has been an integral part of P&G's leadership team with substantial contributions across multiple businesses and in both developed and developing regions, notably in Fabric Care and Home Care and most recently in P&G's

Enterprise markets."

Jejurikar joined P&G in 1989 and has been a member of P&G's global leadership team since 2014, holding various senior leadership roles in categories, sectors and regions, and helped build several of P&G's core businesses including global Fabric Care and Home Care and in regions including North America, Europe, Asia and Latin America.

## ATTENTION TISSUE MANUFACTURERS AND CONVERTERS! TIETOEVRY TISSUE STUDY 2025 HAS LAUNCHED

Finnish technology company Tietoevry has invited the global tissue industry to participate in its Global Tissue Trends Report 2025, launched in collaboration with Tissue World.

The aim of the study is to drive efficiency and sustainable value in the tissue sector, with industry leaders, colleagues, and peers across the global industry invited to participate.

It will analyse key market trends in business including how companies are navigating efficiency challenges, securing sustainable practices, and looking at which innovations are reshaping the tissue sector.

Take part in the global study to help identify emerging trends and opportunities across our sector.

Be part of shaping the future of the tissue industry!

*The questionnaire will take about 10 minutes to complete, and a white paper summarising the study results will be sent to participants on completion of the study.*

*The survey is conducted by independent customer research company Funnel 2.0. Oy and all responses will be treated as confidential.*

To take part in the study go to:  
[www.tietoevry.com/tissuestudy](http://www.tietoevry.com/tissuestudy)

## UCT INTRODUCES LATEST GENERATION UNICO365 LOGSAW

United Converting Tissue (UCT) has launched the latest generation of its UNICO365 logsaw into the global tissue market.

Now with an increased cutting speed of 140 strokes per minute, the company said the updated line is designed to "solve today's cutting challenges with durability, accuracy, and performance beyond industry standards."

Lorenzo Lupi, Vice President Sales and Marketing, told TWM: "The tissue converting industry is undergoing a significant transformation.

"One of the most notable trends is the shift toward higher-density tissue rolls, especially in territories that have large land masses requiring extensive, high polluting road haulage to deliver.

"We have launched the UNICO365 logsaw in

response to this.”

He added that the updated line now offers better absorbency and longer use, reducing packaging and transportation impact.

“At the same time, converters are expected to meet these demands without compromising speed, precision, or quality – which creates substantial stress on existing cutting systems,” he said.

UNICO365 is the result of over two decades of expertise and feedback from more than 100 industrial logsaw installations worldwide.

The recently updated machine now has a cutting speed of 140 strokes/minute, reduces operational waste from 5% to 3%, and has a lower finished product carbon footprint due to less packaging and fewer trucks or containers required for transport.

Lupi added that a key innovation that sets the UNICO365 apart is its patented clamping system: “It is specifically engineered to support cutting of high-density logs without damaging the product surface – while simultaneously solving one of the most critical pain points in logsaw operation: blade overheating,” he said.

The UNICO365 has already been installed in the USA, UK, Korea and Singapore.

### **P&G TO LAY OFF 7,000 STAFF; EXIT SOME PRODUCT CATEGORIES AND BRANDS**

Procter & Gamble (P&G) is to reduce up to 7,000 non-manufacturing roles – approximately 15% of its current non-manufacturing workforce – over the next two years.

Speaking at the 2025 Deutsche Bank Global Consumer Conference in Paris on 5 June, Andre Schulten, Chief Financial Officer, said the move was a result of tariff-related costs and customers growing anxious about the economy.

He said: “Looking ahead, consumers face greater uncertainty. Competition is fierce. The geopolitical environment is unpredictable. And technology is rapidly transforming nearly every aspect of daily life.

“At the same time, we can unlock significant growth by better meeting the needs of currently unserved and under-served consumers, expanding into new segments, and growing markets to best-in-class levels.”

In North America, the company estimates there is up to \$5bn dollars of market potential in its categories, simply by “growing household penetration of our brands among currently unserved and under-served consumers.”

“In Europe, driving consumption and growing markets across the region to best-in-class levels — while just maintaining current market share in our existing categories — is more than a \$10-billion-dollar opportunity.

“Positioning ourselves to best capture these growth opportunities and manage the increasing

near-term challenges benefits from disciplined execution of our integrated growth strategy and even more disciplined resource allocation — human and financial.”

In Fiscal 2026, P&G will begin a two-year effort to “accelerate its growth and value creation.”

“These changes across our portfolio, supply chain and organisation are designed to unlock significant opportunities for stronger delivery of P&G’s integrated growth strategy.

“This is not a new approach, rather an intentional acceleration of the current strategy to widen P&G’s margin of advantage in superiority, fuelled by productivity, to win in the increasingly challenging environment in which we compete,” the company said.

### **Three main areas of focus: portfolio, supply chain and organisation design**

The portfolio choices include exits of some categories, brands, and product forms in individual markets. They may also include some brand divestitures.

“These portfolio moves enable the business to make related interventions in our supply chain — right-sizing and right-locating production to drive efficiencies, faster innovation, cost reduction and even more reliable and resilient supply.

“Finally, there will be additional changes to ensure an even more agile, empowered, and accountable organisation design — making roles broader, teams smaller, work more fulfilling and more efficient, including leveraging digitisation and automation.”

### **KADANT ACQUIRES BABBINI AND GPS ENGINEERING TO EXPAND FIBRE PROCESSING CAPABILITIES**

Kadant has announced it has completed the acquisition of Babbini and G.P.S. Engineering (GPS), two Italy-based companies specialising in industrial dewatering and engineered power transmission solutions.

Babbini is a recognised leader in screw press technology and dewatering applications for multiple industrial sectors, including paper recycling.

GPS supports Babbini’s capabilities with system integration expertise and custom gearboxes for demanding industrial applications.

Babbini and GPS have collaborated with Kadant since 2019, providing innovative upcycling solutions for its fibre processing lines, including reject handling and waste management products and technologies.

Jeffrey L. Powell, President and Chief Executive of Kadant, said: “Acquiring Babbini and GPS Engineering supports our commitment to Sustainable Industrial Processing through the growth of our upcycling capabilities.



**Cascades invests \$3.5m in Kingsey Falls:** (L-r) Hugues Simon, President and Chief Executive of Cascades, with Jérôme Porlier, Executive Vice-President, Tissue

## BTG LAUNCHES SZP-16 INTO THE GLOBAL TISSUE MARKET

BTG has launched its latest innovation for accurately measuring the chemical additive demand of fibres in the paper production – the SZP-16. It is a new addition to BTG’s lab instruments portfolio, and the company said it is “a compact, portable and easy-to-use solution that leads to cost savings.”

Developed for use in paper production, the specialised lab instrument accurately measures the Zeta potential to make fibre additive demands visible. Data that reveal if and how fibres and additives interact, unlock access to more informed decision-making and greater operational efficiency in a paper production.

Sunny Cui, BTG’s Chief Executive and President, said: “BTG uses the latest technology and insights to deliver improved operational efficiencies for our customers. The SZP-16 is a game-changer – the cost-saving potential for additives is great, and along with the PCD-06, BTG is providing mill operators access to better data that will transform efficiency in process surveillance and quality management.”

## CANADA

### CASCADES INVESTS OVER \$5.3M IN ITS GRANBY, QUEBEC PLANT

Cascades has partnered with Infinity Machine & Engineering Corp. to undertake a \$5.3m investment to increase the capacity of two of its production

lines. A new packer and higher-performance case packer have been added to the machine that produces bathroom tissue for the Cascades PRO AfH product line. These additions will increase production by 20% by the end of 2025.

Additional improvement investments have also been made in another machine producing retail bathroom tissue. The company said the integration of the equipment will improve productivity and enhance the quality of the bathroom tissue produced. These changes will also increase production by 20% by the end of 2025.

Hugues Simon, President and Chief Executive of Cascades, said: “These enhancement at our Granby tissue plant will expand our ability to meet the needs of our current and future customers. This investment is part of an ongoing effort to optimise our operations and consolidate our growth path.”

Acquired in 2011, the Granby tissue plant currently serves the residential, commercial and business markets for hygiene solutions and tissue paper.

### CASCADES INVESTS OVER C\$3.5M IN KINGSEY FALLS TISSUE PLANT

Canadian tissue manufacturer Cascades has invested C\$3,560,000 to upgrade a converting line at its Kingsey Falls tissue plant. The investment involved replacing a packager and bagger with higher-performance equipment, which the company said will result in two major benefits – optimising the bathroom tissue packaging process and increasing productivity.

The project is expected to increase the converting line's production rate at the packaging level by 8% compared to current performance levels, as well as improve overall line throughput, specifically through improved availability and a faster average speed.

Hugues Simon, President and Chief Executive of Cascades, said: "The project implemented at our Kingsey Falls tissue plant will enable us to increase our capacity and be valued partner for our current and future customers.

"This investment exceeding C\$3.5m – part of our continuous improvement efforts – demonstrates our commitment to driving our growth."

Cascades is the industry leader in Canada and the sixth-largest tissue paper manufacturer in North America. Opened in 1977, the Kingsey Falls tissue plant currently serves the residential hygiene solutions market.

## CHINA

### LONGJING PAPER STARTS-UP FIRST ANDRITZ-SUPPLIED PRIMELINEHYTAD TISSUE MACHINE

China's Chongqing Longjing Paper Co. has started-up the first Andritz-supplied PrimeLineHyTAD tissue machine. This start-up marks a milestone for premium tissue production in China, and also Andritz's breakthrough with this technology in the industry.

Andritz said the PrimeLineHyTAD is specifically designed for fibre – and energy-saving production of premium tissue products such as kitchen towels, wiping paper, toilet paper, and facial tissues.

The company said: "With the unique HyTAD process, it can save up to 25% in fibre compared to traditional dry crepe tissue machines, and up to 50% in energy compared to structured TAD tissue machines.

"These savings significantly reduce production costs and meet current market demands for environmental protection and sustainability."

Key components such as the PrimePress X shoe press and the PrimeDry IM impingement dryer play a major role in the HyTAD process.

The shoe press at Chongqing Longjing, with the largest diameter in the global tissue industry and a line load of up to 500kN/m, achieves a dryness of approximately 48% after the press section. The impingement dryer utilises exhaust air from the hood to pre-dry the paper, achieving more efficient drying while further reducing energy consumption.

The PrimeLineHyTAD tissue machine at Chongqing Longjing operates at a speed of up to 1,500mpm and has a width of 2.85m.

It is equipped with a Metris digitalisation system for data analysis, display, and statistical process control, further enhancing production efficiency and product quality.

Zhang Yun, President, Chongqing Longjing Paper Co., said: "This collaboration was a critical move in Longjing's "Green + High-end" strategy.

"The Andritz team showcased professional execution, working closely with our team to realise start-up on schedule, securing the crucial timeline for mass production.

"This cooperation also serves as a benchmark and role model for in-depth collaboration between international equipment suppliers and Chinese enterprises."

Prior to delivery, extensive testing was conducted at the Andritz Tissue Innovation and Application Centre to validate product quality and machine performance. Chongqing Longjing Paper Co. was established in 2006 in Chongqing City. The company produces household paper and products include toilet paper, facial tissues, boxed facial tissues, and other paper products, primarily using high-quality bamboo fibre as the raw material.

## NEW ZEALAND

### "PIONEERING REBUILD": ESSITY AND TOSCOTEC HARNESS GEOTHERMAL ENERGY

Essity and Toscotec have started up the world's first tissue machine running solely on geothermal steam at Essity's Kawerau site in New Zealand.

With the project, Toscotec said it "continues to demonstrate its leadership as technology supplier" in enabling the energy transition of the tissue industry from fossil-based to renewable energy.

The project has fully achieved its targets, ahead of schedule.

Toscotec said the rebuilt on PM3 has "registered a significant reduction of the carbon emission associated with its production", due to the replacement of natural gas burners with a completely geothermal drying system.

Moreover, the upgrade delivered a production increase and improved the machine's formation and product range capability.

The supply included a complete TT SAF Short Approach Flow system, a new TT Headbox, modifications to the forming and press sections, as well as a new drying section.

In the drying area, both the new TT SYD Steel Yankee Dryer and the steam-heated TT Hood use the geothermal steam tapped from the ground.

Matthew Bain, Project Manager at Essity, said: "We are very proud to be operating efficiently the first tissue machine in the world running solely on geothermal steam.

"Essity continues setting new industry standards in sustainable tissue production, so that we can offer our customers and consumers climate friendly products."

## INDIA

### JANI SALES TARGETS PREMIUM TISSUE MARKETS WITH PM3 INVESTMENT

India's Jani Sales has boosted its production capacity after investing in a paper machine.

TM3 will have a production capacity of 80tpd and is expected to come on stream in May 2026.

Once up and running the family-run company's total scheduled annual production capacity will increase to 82,000tpy, combining the strengths of its PM1 MG Machine, PM2 Tissue Machine, and new PM3 Tissue Machine.

Abiali Jani, Managing Director, Jani Sales, said: "This investment marks another significant milestone in our journey of innovation and excellence in paper manufacturing. It is a testament to our unwavering commitment to quality, technological advancement, and sustainable growth."

PM3 will produce premium tissue products, which he said further reinforces the company's position as a trusted global supplier.

"At Jani Sales, we believe in pushing boundaries and setting new benchmarks. PM3 is more than just a machine – it's a symbol of our dedication to innovation and customer satisfaction."

The company declined to announce the name of the machinery supplier at this time.

## UNITED KINGDOM

### EREN HOLDING INVESTS IN FURNACE UPGRADE AT SHOTTON MILL

Türkiye's Eren Holding is to boost production capacity at its Shotton Mill in Wales, after investing in a Valmet-supplied furnace upgrade.

Most of the the mill's bubbling fluidised bed (BFB) boiler furnace will be covered with coated panels that create a protective layer on the surface, resisting corrosion and erosion and thereby extending the furnace's lifetime.

Expected to be delivered by the end of 2025, the scope of supply includes a furnace upgrade with specially coated panels.

The service agreement provides inspection services and a tailored online training package for the mill's employees.

The value of the order will not be disclosed.

Shotton Mill is currently undergoing a significant investment programme including a Valmet-supplied tissue production line and a Valmet-supplied containerboard line.

When operational, the site will have the capacity to manufacture 67,000tpy of tissue paper and 750,000tpy of containerboard.

Shotton Mill Limited is part of Eren Holding.



Family-run Jani Sales: (L-r) Saifee Jani and son and Managing Director Abiali Jani



**Production boost:** Valmet will deliver an IntelliTissue 1600 tissue machine (pictured) to Suparma's mill in Surabaya, Indonesia

## INDONESIA

### SUPARMA TARGETS ASIA PACIFIC MARKETS WITH TM INVESTMENT

Suparma has invested in a Valmet-supplied IntelliTissue 1600 machine to be installed at its mill in Surabaya. Start-up is planned for 2026, and once up and running the PM will produce high-quality tissue products for the Asia Pacific market. Joseph Sulaiman, Director, Suparma, said: "We chose Valmet as the supplier for our milestone project due to their good understanding of our specific needs, and the excellent collaboration between our teams demonstrated during the previous project. Undoubtedly, we wish to grow our partnership further in the future."

The scope of supply will include a complete tissue production line, including stock preparation equipment. It will feature an IntelliTissue 1600 machine equipped with an IntelliJet V headbox, Crescent Former, IntelliPress, IntelliYankee dryer, Exhaust Cap hood, and an IntelliReel section, adding an additional 26,500tpy of tissue paper to Suparma's current production capacity. In 2022, Suparma also started-up a Valmet-supplied IntelliTissue machine (TM10) installed at the same mill. Established in 1976 in Surabaya, Suparma is a leading paper and tissue manufacturer dedicated to providing reliable and high-quality products. The company serves both national and international markets, meeting diverse customer needs with a wide range of paper products.

## NORTH AMERICA

### K-C TO INVEST \$130M TO BOOST CONSUMER PRODUCTS

Kimberly-Clark (K-C) is to expand production at its Mobile, Alabama-based facility after investing over \$130m in a consumer hygiene production line. The

line is expected to position the facility for future investment, while also enhancing the site's role in K-C's North American operations. Tamera Fenske, Chief Supply Chain Officer at K-C, said: "This expansion represents a strategic investment in Kimberly-Clark's future and underscores our commitment to solving unmet consumer needs through innovation. Our Mobile facility exemplifies manufacturing excellence, powered by a team whose skill, dedication and passion deliver the essential products our consumers count on every day." "This investment not only enhances our North American manufacturing capabilities but also deepens our longstanding partnership with the Mobile community."

The new production line is expected to become operational by the third quarter of 2027. The Mobile Chamber is a private business organisation with more than 1,600 members and the economic developer for the City of Mobile and Mobile County.

## COLOMBIA

### GRANDBAY PAPELES NACIONALES BOOSTS CAPACITY WITH TM INVESTMENT

Colombia's GrandBay Papeles Nacionales has invested in a Toscotec-supplied AHEAD 2.2 tissue line to be installed at its plant in Pereira. Start-up of the machine is planned for the second semester 2025, and the turnkey project will produce bath tissue and kitchen towel paper. The scope of supply includes TT NextPress shoe press technology, a TT SYD Steel Yankee Dryer, and TT Hoods, and Distributed Control System TT Brain DCS. It has a sheet width of 3.6m will have a production capacity of over 40,000tpy. GrandBay Paper and Care Products manufactures personal and home care products. It has a presence in Central America, the Caribbean, Colombia and Venezuela, among others.

# PORTUGAL EXPANDS ITS GROWING REPUTATION AS A COMPETITIVE PLAYER IN THE EUROPEAN TISSUE MARKET



Innovative advances across the industry have seen 25% of tissue production going for export, three times higher than imports. Report by Bruce Janda, Senior Consultant, ResourceWise.

Portugal, which borders Spain and the Atlantic Ocean, has a rich trading history. Brazil’s language and culture reflect the Portuguese Empire’s influence. Both countries share another similarity: they produce and consume eucalyptus market pulp for tissue production. As tissue exporters, they can integrate more eucalyptus pulp production on-site to lower the cost of exporting finished tissue compared to market pulp.

Figure 1 shows Portugal’s tissue production facilities. Besides the integrated site, four other market pulp sites also produce market pulp. There is significant potential for additional integrated tissue production to achieve cost savings and environmental benefits.

Portugal has a population of approximately 10.5m, which has declined slightly over the past 10-12 years. The World Factbook projected a – 0.14% growth rate in 2024, while data from ResourceWise’s FisherSolve reports some recent growth due to immigration. Portugal is becoming an increasingly popular destination

for retirees from colder and more expensive northern countries. Although older immigrants may not have a long-term effect on the population, they are likely to impact demand immediately. Figure 2 presents Portugal’s population as bars since 2007.

Real GDP per capita, expressed as PPP (purchasing power parity), is represented by the blue line in Figure 2. It has shown significant growth following the Great Recession and the Covid-19 pandemic. This income level is expected to continue supporting the increase in per capita tissue consumption. Portugal’s tissue consumption per person tends to be lower than that of northern Europe, indicating potential for growth in categories other than toilet paper, which is currently the primary focus. Additionally, Portugal is reporting increased installation of bidets and automated toilets, similar to trends observed in Japan. This may decrease demand for bath tissue but create opportunities for growth in towel and AfH commercial applications.

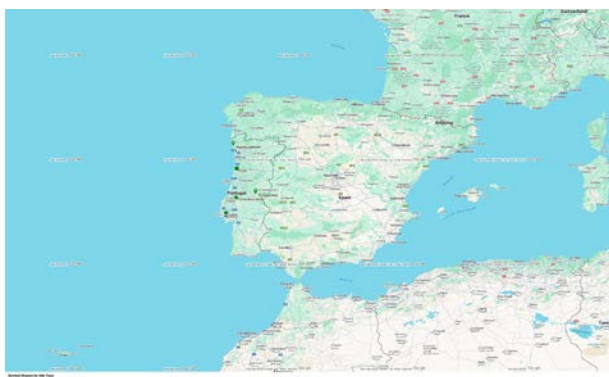


Figure 1: Portugal Tissue Locations

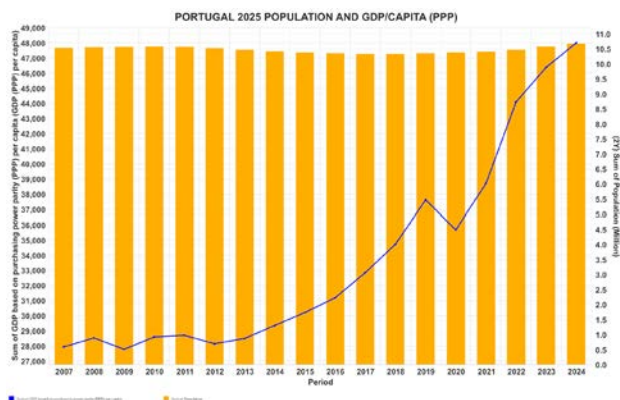


Figure 2: Portugal Population and GDP/Capita (PPP)

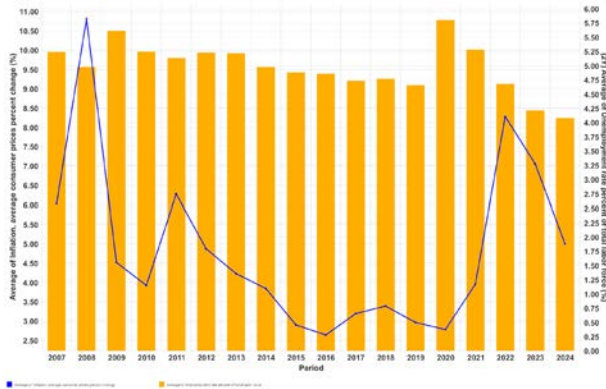


Figure 3: Portugal Inflation and Unemployment Trend

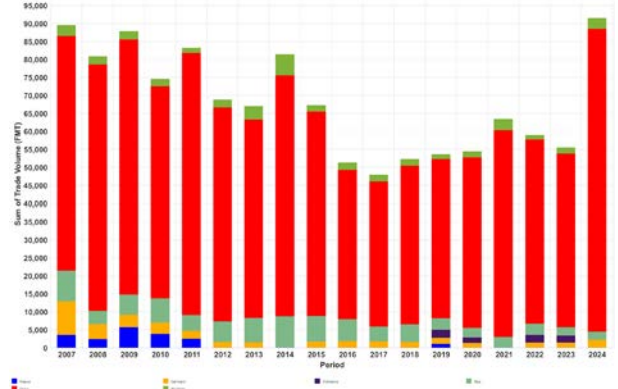


Figure 4: Portugal Tissue Imports Trend

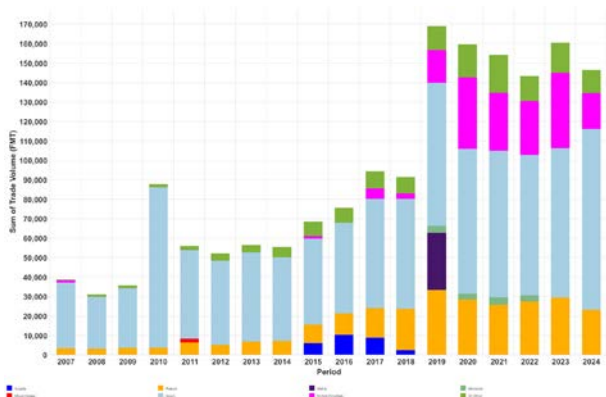


Figure 5: Portugal Tissue Exports Trend

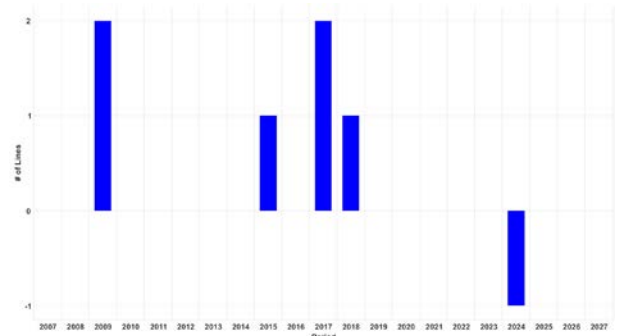


Figure 6: Portugal Tissue Machines Count Changes Trend

Inflation and unemployment are key indicators of economic factors that slow down tissue consumption. Figure 3 shows Portugal’s inflation trend as a blue line. Inflation has mostly been stable, except during the pandemic recovery period, when it spiked in 2022. Unemployment is represented by the bars in the chart and is currently near 4%. However, the youth unemployment rate for ages 15-24 is around 21%, which is concerning and similar to the situation in many other European countries.

Figure 4 shows Portugal’s tissue import trends, with Spain as the main source. Imports notably spiked in 2024, coinciding with the shutdown of a tissue line (see Figure 5).

Portugal has seen significant growth in tissue exports, as shown in Figure 5. Spain, France, and the United Kingdom are the main tissue buyers. Exports are roughly three times higher than imports (except for 2024) – exporting about 25% of its tissue production capacity.

Portugal added six new tissue machines and removed one in 2024, positioning it mid-range for machine technical age (see Figure 11). No new projects are planned.

Eucalyptus trees were introduced to Portugal in the late 19th century to prevent soil erosion and provide income for rural communities. Today, bleached eucalyptus pulp makes up 3% of Portugal’s exports and

1% of its GDP. Eucalyptus plantations cover about 25% of all forested land. Almost 75% of these plantations are managed by private landowners, with the rest overseen by paper companies. Figure 7 displays eucalyptus pulp production for the market, showing the proportions of kraft and magnesium sulfite pulp. The sulfite pulp is used in viscose production for fibre manufacturing. Some kraft pulp is used domestically, excluding integrated pulp produced at tissue manufacturing sites. These eucalyptus plantations pose similar environmental risks as those in Brazil: fire risk, water demand, and soil depletion. Figure 7 shows the market pulp production of Kraft and magnesium sulfite (Magnafite) eucalyptus pulps at the five market pulp mills.

Portugal has several integrated tissue mills alongside virgin pulp mills. Nearly 60% of the country’s tissue facilities are integrated, either with virgin or recycled pulp, providing opportunities for cost savings and environmental benefits through the process synergies of larger combined sites.

This integration enhances operational efficiency and supports cost-effective production, which is further explored in subsequent figures. Additionally, product formats and manufacturing technologies have diversified, reflecting the evolving preferences of consumers and the adoption of innovative processes throughout the industry. These advances contribute to

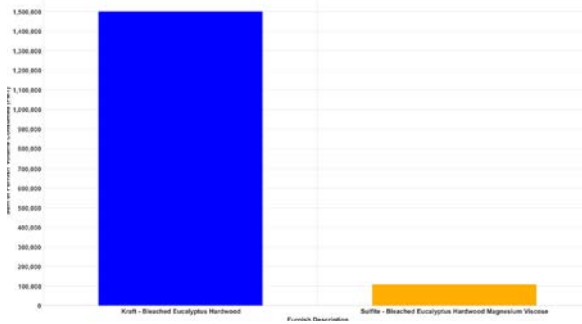


Figure 7: Portugal Market Pulp Production is all Eucalyptus

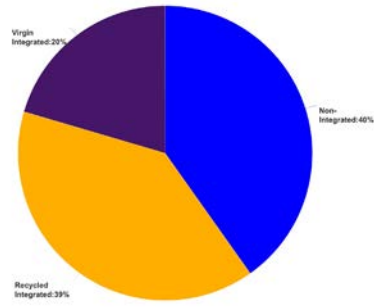


Figure 8: Portugal Tissue Site Integration

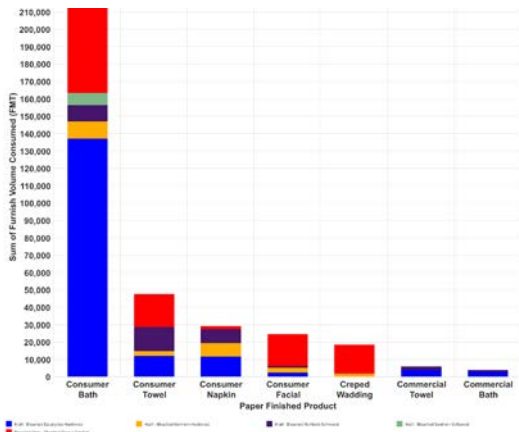


Figure 9: Portugal Tissue Product Formats by Fibre Source

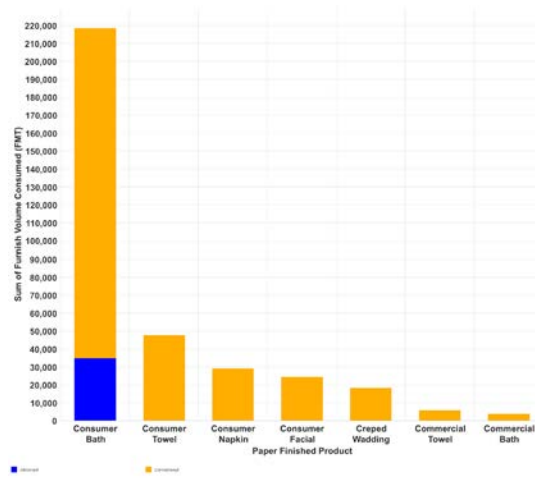


Figure 10: Portugal Tissue Products by Technology

Portugal’s growing reputation as a competitive player in the European tissue market.

Fibre sources for Portugal’s tissue production are shown in Figure 9. Consumer bath tissue accounts for more volume than all other tissue product types combined. Eucalyptus fibre accounts for approximately 60% of the bath tissue volume. Recycled fibre is also used in bath tissue, as well as in consumer towels, facial tissue, and creped wadding. Commercial products for AfH use have relatively small volumes compared to those in other European and North American countries, indicating an opportunity for increased tissue demand.

Portugal also has advanced tissue manufacturing technology that enhances the performance of tissue products with lower fibre grammage. This technology is specifically focused on bath tissue production, likely for export. Growing tissue demand and trade expansion may require the use of advanced technology to produce consumer kitchen towels that meet expectations in France and the UK.

A comparison set of tissue manufacturing countries was selected from nearby trading partners and countries with a focus on tissue exports to benchmark Portugal’s tissue machine quality. This set includes France (imports), Germany (imports), Italy (imports), Spain (imports and exports), Indonesia (imports), and Brazil (benchmark).

Results of this benchmark comparison are shown in Figure 11. Spain and Portugal are in the middle of this

group for technical age, while Indonesia and Brazil have newer tissue machine fleets on average. The Y-axis of this chart is the average machine speed. This was chosen as a benchmark because it shows Portugal’s tissue machines running at higher speeds than Spain, France, and Germany, indicating technical capability. It should be noted that the width of Portugal’s machines is slightly narrower than those of the others.

Figure 12 shows the average tissue production costs across countries in the comparison group, including Portugal. Each bar’s height indicates the cash cost per ton, while its width reflects tissue capacity. The coloured segments represent various cost components, such as raw materials, pulp, chemicals, energy, labour, overhead, and credits. Brazil, Indonesia, and Portugal have the lowest costs compared to other European tissue producers. Integrating tissue manufacturing with fibre production on-site provides some cost benefits over relying on purchased pulp.

Figure 13 illustrates the relative average viability of the comparison country set of tissue machines. FisherSolve’s algorithm utilises estimated capital requirements, cash production costs, machine size, technical age, grade risk in the local economy, internal company risk, manufacturing competitiveness of the area, tons per unit trim, and export destination charges. Portugal and Indonesia hold the most viable positions, followed by Spain. Meanwhile, France, Germany, and

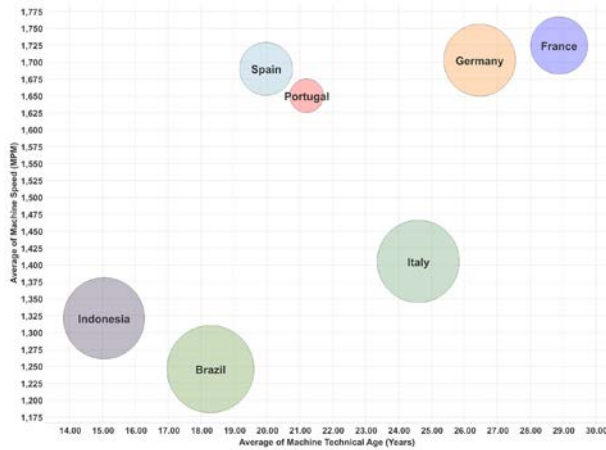


Figure 11: Portugal Tissue Machine Quality Comparison

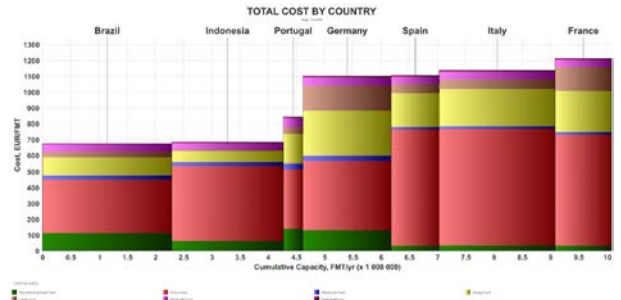


Figure 12: Portugal Comparison Cash Cost

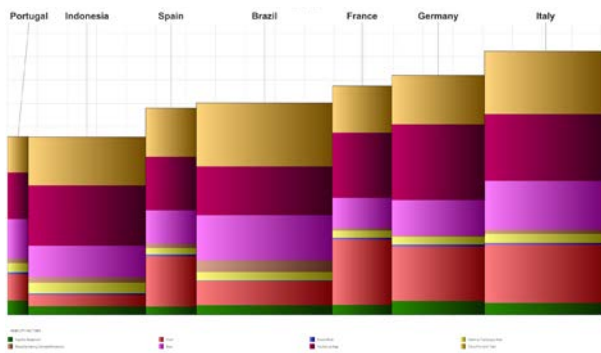


Figure 13: Portugal Tissue Machine Viability Comparison

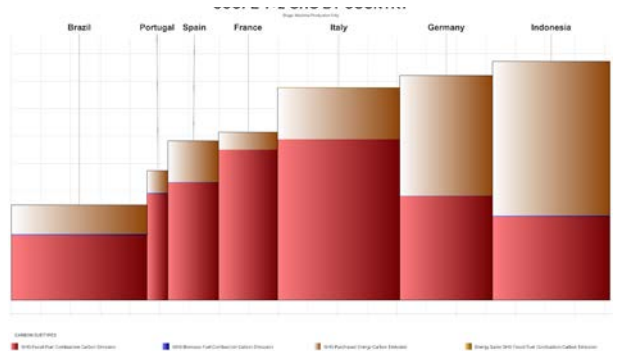


Figure 14: Portugal Comparison Carbon Emissions/Ton Scopes 1&2

Italy have significantly lower viability scores for their tissue capacity. This indicates that they would be at risk if Portugal were to expand their tissue capacity.

Figure 14 illustrates Scope 1 (on-site fuel) and Scope 2 (electricity) carbon emissions per the ton of finished tissue produced. The data indicates that Brazil and Portugal’s carbon emissions are low, due to low electric grid carbon (scope 2 balancing out high carbon emissions (scope 1)) from fuel oil burned onsite. Only France’s nuclear-based electric grid does better to facilitate low-carbon tissue production. Brazil appears to be getting more process heat from renewable sources on-site than Portugal. Conversely, Portugal has a lower electric grid carbon content, along with Spain.

### PORTUGAL TISSUE SUMMARY

- Portugal’s tissue manufacturing sector demonstrates strong machine speeds and comparatively low production costs when benchmarked against global competitors.
- The integration of tissue production with on-site fibre manufacturing offers Portugal a significant cost advantage relative to countries dependent on externally sourced pulp.
- Portugal and Indonesia lead in machine viability, whereas France, Germany, and Italy exhibit lower viability scores and face heightened risk should Portugal increase its production capacity.

- Portugal sustains low carbon emissions per ton of tissue, primarily attributable to its low-carbon electric grid; in this regard, only France, with its nuclear-based grid, achieves superior performance.
- While Brazil attains lower process heat emissions due to higher utilisation of renewable on-site sources, Portugal excels in maintaining low electric grid carbon content, comparable to Spain.
- The Portuguese tissue industry is shaped by fluctuations in fibre prices, exchange rates, and evolving environmental regulations, alongside ongoing changes in ownership structures and potential capacity investments from neighbouring countries.

A detailed understanding of tissue producers and their individual machines is crucial for analysing the competitive landscape. This article presents an overview of the current tissue industry in Portugal. Fluctuations in fibre prices, exchange rates, and environmental regulations create both opportunities and challenges for industry participants. Moreover, changes in ownership and consolidations are expected to persist among tissue mills in Portugal, while investments in tissue-making capacity from neighbouring countries may impact imports and exports.

# PORTUGAL: HOW A HIGHLY MATURE MARKET PLANS TO MAINTAIN GROWTH

Promotion, innovation investment, adding value, discounting, cost-cutting ... industry strategies as the economy emerges from a slowdown. Report by Per Brandberg, Consultant, Euromonitor International.



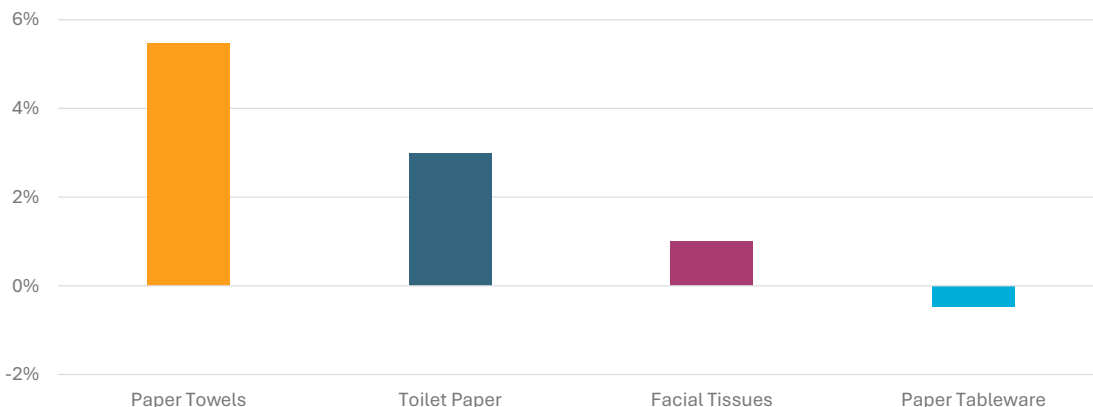
## TOILET PAPER CONTINUES TO LEAD SALES

Having experienced significant price increases in recent years, the Portuguese retail tissue market saw a slowdown in current value growth in 2024, primarily due to a shift towards lower-cost brands and private label products. Toilet paper remains the largest category within retail tissue, due to its high penetration and frequent usage. Despite reaching maturity, the category managed to grow in volume terms in 2024, supported not only by household demand but also by small businesses like local lodgings, restaurants, and cafes that purchase in retail due to promotional campaigns.

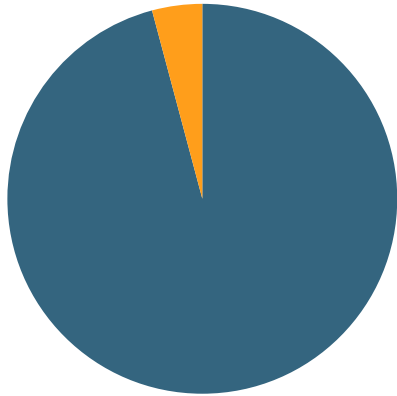
Paper towels saw the highest rate of volume growth, following the declines of the previous two years, when consumers had rationalised usage to save money. The availability of less expensive options, including private labels offering large-sized packs at competitive prices, has contributed to this rebound.

Speaking of private label, they have a substantial presence in the Portuguese retail tissue market. The economic challenges of recent years have driven consumers toward more cost-effective options, bolstering private label growth. As a response to the increased competition from private labels, brands have stepped up investment in innovation, with established brands investing in premiumisation strategies to differentiate themselves from these more affordable competitors. This approach caters to consumers with higher purchasing power who are willing to invest in value-added products.

Premiumisation strategies include introducing products that emphasise attributes such as extra softness, unique fragrances (such as aloe vera and vanilla), and multi-ply options (3-ply and 4-ply) as well as premium features such as higher absorption and seasonally themed products. These enhancements cater to consumers seeking superior quality and a touch of luxury in everyday essentials.



Above: Retail tissue subcategories, volume growth, 2024



■ Offline channels ■ Online channels

**Above:** Retail tissue channel split, value, 2024

**The retail tissue market in Portugal is highly mature, offering limited opportunities for future volume growth. Following significant price increases in recent years, a slowdown in value growth is anticipated over the forecast period**



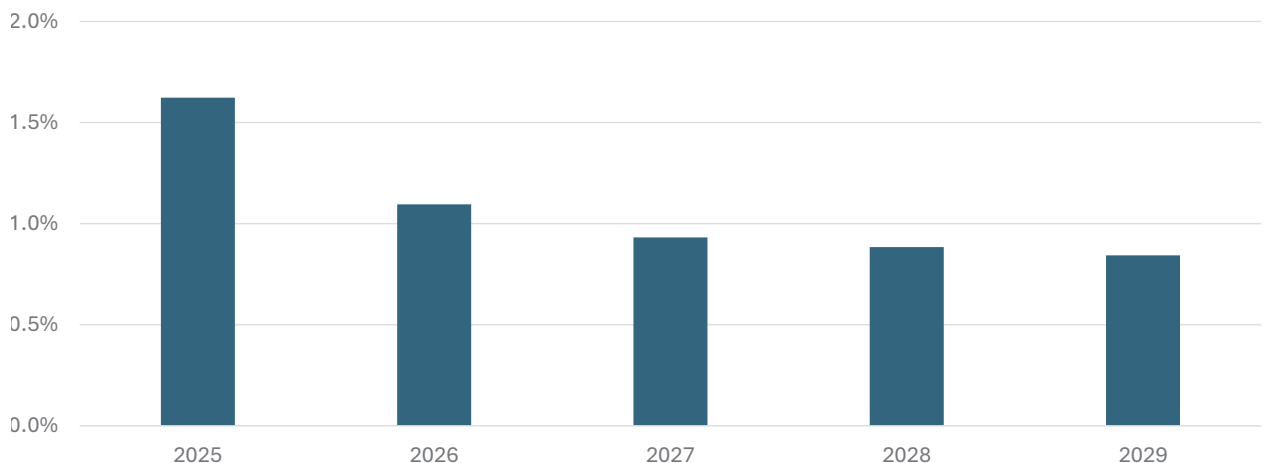
**NEW STORE OPENINGS FURTHER BOLSTERED RELEVANCE AND GROWTH**

Supermarkets’ dominance follows alignment with consumer purchasing behaviours - specifically the desire for proximity, frequent shopping trips, and smaller basket sizes. In recent years, new store openings have further bolstered this channel’s relevance and growth. Supermarkets registered the highest rate of value growth within the grocery channel in 2024.

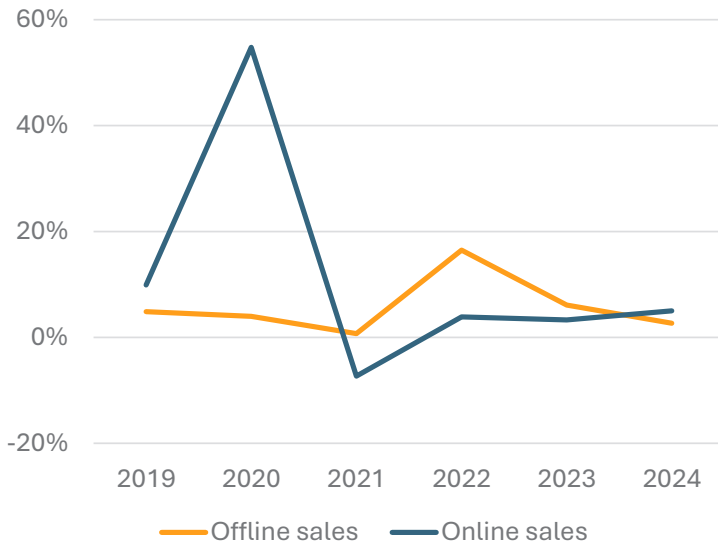
E-commerce gained a small amount of ground in 2024. The channel is expected to make considerable strides over the forecast period, driven by increasing digitalisation, the development of online retail platforms, and advancements in last-mile delivery solutions. However, Portuguese consumers still show a preference for physical stores. While delivery platforms are expected to boost e-commerce sales, delivery costs will continue to hinder wider channel adoption as Portuguese consumers remain price sensitive due to the high cost of living.

**RETAIL TISSUE MARKET WILL SEE GREATER PREMIUMISATION**

The retail tissue market in Portugal is highly mature, offering limited opportunities for future volume growth. Following significant price increases in recent years, a slowdown in value growth is anticipated over the forecast period (at constant 2024 prices). Manufacturers are responding to this challenge by focusing on premiumisation strategies, introducing higher-quality products characterised by features such as additional plies and enhanced softness which is expected to result in an increase in 3- and 4-ply toilet paper options in the coming years. Additionally, the fragrance trend observed in other markets, such as home care, is extending to toilet paper, alongside other benefits such as improved softness, and increased durability. More



**Above:** Retail tissue, volume growth, forecast period



Above: Retail tissue channel growth, value

compact paper products are also set to grow, addressing logistical and stocking challenges while offering environmental benefits.

Among retail tissue products, paper towels are expected to present the best growth opportunities. Sales will be driven by improved economic conditions, which will encourage consumers to increase purchases of items they deem not strictly essential. During times of financial hardship, consumers tend to replace paper towels with alternatives, such as cloths, for cleaning surfaces.

### ONLINE SHOPPING REMAINS LOWER LEVEL FOR GROCERIES

Online grocery shopping – driven by increasing consumer digitalisation, advancements in e-commerce platforms, and improvements in last-mile delivery solutions – is expected to gain traction but will remain less significant compared to categories like clothing or technology.

Consumers’ shopping preferences contribute to the slower adoption rate, such as frequency of shopping, proximity to physical stores and the tendency for smaller basket sizes. Additionally, challenges like maintaining competitive pricing and ensuring product availability have impacted the growth of online grocery platforms.

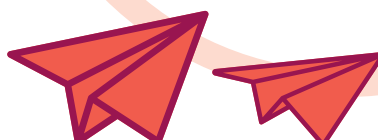
### Sustainability gains importance as consumers look for eco-friendly options

Sustainability continues to be a central focus in the retail tissue industry, with a growing emphasis on alternative fibre sources and environmentally friendly production methods. Consumers are increasingly concerned about deforestation and the environmental impact of traditional wood-based paper production. This has led to a heightened interest in tree-free paper made from

non-wood fibres such as bamboo, kenaf hibiscus, hemp, and agricultural residues like sugarcane bagasse and straw.

The industry is also witnessing a shift towards unbleached, brown-coloured paper products. This change addresses consumer concerns about the chemicals used in the bleaching process and reflects a willingness to accept natural-coloured paper for environmental benefits. Products claiming reduced water usage and reliance on renewable energy sources are also expected to attract consumer preference. At the same time, technological advancements are also being pursued to improve the softness and appeal of recycled paper products in a bid to make eco-friendly options more attractive to consumers.

**Online grocery shopping – driven by increasing consumer digitalisation, advancements in e-commerce platforms, and improvements in last-mile delivery solutions – is expected to gain traction but will remain less significant.**



# SOURCE-TO-SHELF INNOVATION AND STRONG NET- ZERO STRATEGIES BEHIND RENOVA'S SUCCESS



The green pioneer and award winner is present in 70 countries across five continents. TWM Senior Editor Helen Morris spoke to Francisco Barreiro, Director of Innovation and Sustainability.

**"Black toilet paper conquered the world with its boldness,"** Francisco Barreiro, Head of Innovation and Sustainability, Renova, says from the company's headquarters in Torres Novas, north of Lisbon. "But the brand didn't stop there. The continuous building of Renova has been both the driving force and the tool behind our development outside Portugal."

TWM first visited the company's Torres Novas plant in 2013 ... always ahead of its time, the company's open-plan office area contained a large punch bag, boxing gloves, a poster indicating that this was a "tie-free" zone, Jackson Pollock-styled artworks covering the floor of the brain-storming areas, and shopping trollies dotted around the office full of their famous brightly-coloured tissue products... and since then, Renova's modernisation process has stepped up yet another gear.

In 2015, Renova announced it had become the first European tissue producer to invest in NTT tissue technology. The Valmet-supplied Advantage NTT line was installed at the company's Torres Novas mill in 2016. The result has been a textured tissue paper that "combines softness and strength,

which has become a powerful driver of the brand's growth," he adds.

More recently in 2024, the company announced it had invested in a Toscotec-supplied complete rebuild of its PM6's Yankee Hoods and air system at its facility in Torres Novas. The upgrade was planned to deliver gas consumption reductions exceeding 25%, which "will significantly bring down carbon emissions and increase machine runnability."

The path toward Net-Zero Carbon emissions, Barreiro says, has been a priority: "Photovoltaic panels and a biomass plant were installed to eliminate the direct use of fossil fuels. In addition to using certified forest residues, the biomass plant has the unique feature of processing sludge from the recycling unit and wastewater treatment facilities, transforming it into energy instead of sending it to a landfill."

Renova launched its unique black toilet paper into the world in 2005. Since then, it launched customer-tailored personalisation through the "Made by You service" (available at myrenova.com online store), and the Renova Pet Care line for four-legged friends, and much more.

In packaging, Barreiro says the company introduced "the first paper-wrapped tissue products in mid-2017, and in 2025 we surprised the market with Crystal Paper – the world's first transparent paper packaging." Recyclable, compostable, and safe for food contact, he says the product offers the transparency



<https://www.tissueworldmagazine.com/departments/operations-report/portugals-tissue-pioneer-renova-innovates-to-thrive/>



**European-first:** in 2015, Renova became the first European tissue producer to invest in NTT tissue technology at its facility in Torres Novas, Portugal (pictured)

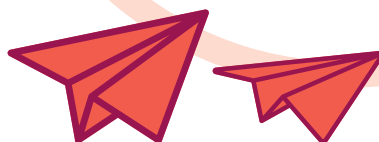
and performance of plastic, but without its environmental footprint.

As a business, he adds that sustainability goes beyond eliminating plastics: "It means reducing water and energy consumption, minimising waste, investing in clean energy, and ensuring ethical and inclusive labour practices. This philosophy has gained international recognition, crowned with an international green design award in January 2025."

Renova TextilPapier is the latest innovation: "Imagine turning old t-shirts and jeans into sophisticated, soft, and sustainable paper. That's exactly what it is: recycled textile fibres combined with natural fibres, resulting in a premium and surprising product. In a world where only 1% of used clothing is recycled, Renova TextilPapier is a solution that actively contributes to a circular economy."

Renova – with the promotional line of "The Sexiest Paper on Earth" – is now studied at leading business school INSEAD, ranking among the best-selling classic case studies since 2020, and inspiring generations of

**The path toward Net-Zero Carbon emissions, Barreiro says, has been a priority: "Photovoltaic panels and a biomass plant were installed to eliminate the direct use of fossil fuels."**

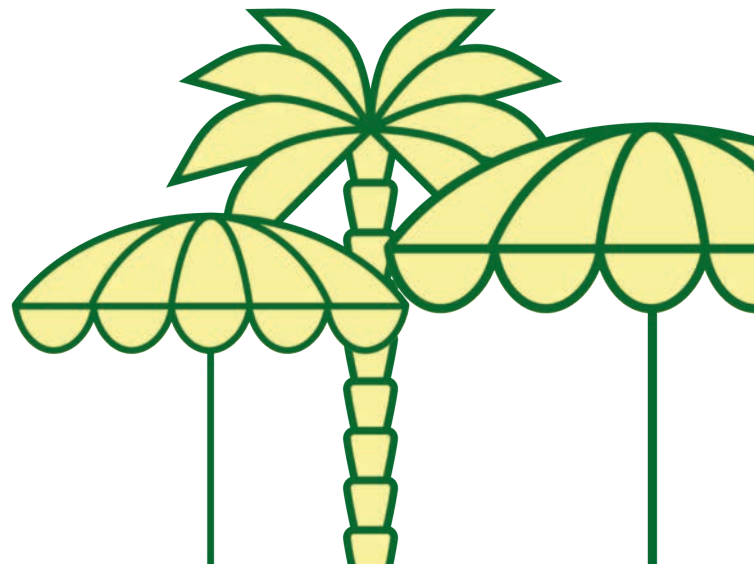


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**Product innovation:** Renova's unique black toilet paper, launched in 2005

managers and entrepreneurs at some of the world's top business schools. "It has offered a new perspective on transforming a traditionally 'unemotional' product into something desirable," he says.

In the next few years, the company has no plans to slow down its growth: "Our main goal is to continue expanding across Europe. We aim to strengthen our presence in markets where we are already established while exploring new opportunities in nearby European countries."

At the same time, the company will keep on investing in innovation across all areas – product design, distribution networks, processes, sustainability, communication, and more – as well as in the widespread implementation of artificial intelligence. "This will accelerate the internationalisation of the Renova brand, offering

innovative and meaningful products that enhance people's well-being.

Across Europe's tissue and towel industries, he says the reality of the Portuguese market is not very different from the rest of Europe: "There is a growing demand for "bulk" formats, with higher unit counts, as a way to reduce the cost per unit and respond to increasing price sensitivity. At the same time, there's a strong focus on logistics optimisation – whether in palletisation and transportation or through design solutions that reduce waste, incorporate more sustainable materials, and align with "green design" principles."

In retail, he says that proximity has become increasingly important: "Smaller store formats within major chains often mean a reduced variety of brands and, in some cases, the exclusive dominance of private labels. This phenomenon, combined with the fact that the Iberian market is the second largest for private labels, has driven sales in this segment."

Regarding sustainability, the trend is clear. It is no longer a differentiating factor commanding a price premium, but a basic requirement: "Consumers now expect products to be sustainable by default and, in addition, to deliver high performance."

The events of the past five years have resulted in greater convenience for consumers: "Covid-19 acted as a catalyst for changes in citizens' lifestyles. Today, there is a greater appreciation for the possibility of remote work and the convenience of online shopping. In terms of tissue consumption, there has been a reduction in the number of categories purchased, with consumers opting for products perceived as more versatile."

Simultaneously, he says there has also been a heightened concern for personal hygiene, which has "fostered the introduction and widespread acceptance" of complementary products, including wet toilet paper.

The Portuguese tissue market has seen "slight growth" in consumption, in the single-digit





**Renova's French facility:** the company will continue investing in innovation across all areas – product design, distribution networks, processes, sustainability, and communication

range, which he says reflects a relatively stable but positive trend: "This pattern is expected to continue in the coming years, supported by modest demographic growth, the increasing importance of tourism – which particularly drives consumption in the AfH channel – and the fact that the sector is increasingly operating from an Iberian and European perspective.

Renova is currently present in over 70 countries across all five continents, with international markets playing "a very significant role", accounting for more than 50% of total revenue.

In the coming years, the Portuguese tissue market, as well as other European markets, will face significant challenges – from growing pressure

on human resources in a continuous production sector, to rising labour costs and retailers demands for greater operational efficiency.

However, he says these challenges "also create opportunities for the most resilient operators, capable of adopting artificial intelligence solutions, exploring new retail formats, strengthening online channels, and turning convenience, sustainability, innovation, and competitiveness into strategic drivers of differentiation and growth."

Watch this space.

**World-famous:** a range of Renova's vibrantly-coloured toilet tissue products



# 'THE FIBRE TRANSITION IN TISSUE IS MORE THAN A TECHNICAL ADJUSTMENT ... IT IS A PATHWAY TO A MORE COMPETITIVE, EFFICIENT, AND SUSTAINABLE INDUSTRY'

Report for TWM by Suzano's Pablo Cadaval Santos, Research and Development Director, and Heloisa Ramires, Research and Development Executive Manager.



**A**s global tissue demand continues to climb, the industry is proportionally shifting towards higher hardwood consumption (Figure 1). This trend is partly influenced by competitiveness challenges affecting NBSK pulp supply, with limited opportunity to increase volume growth, as well as environmental and regulatory pressures. Together with high capital requirements for modernisation, the industry's supply landscape is gradually shifting.

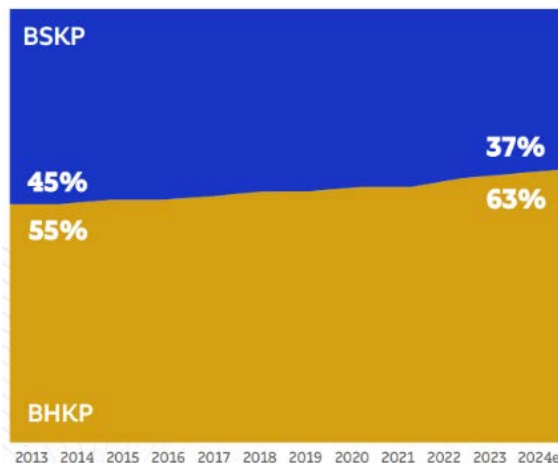
Regardless of these pressures, much of the increasing market share for hardwood pulp – in particular BEKP pulp – has thanks to recent innovations been unlocking new opportunities for cost competitiveness and product sustainability.

As the world's largest producer of eucalyptus pulp, Suzano has been innovating to support this shift, resulting in direct benefits for our customers.

One of the great advantages of eucalyptus fibre quality is a more uniform range of fibre lengths, homogeneity and smoothness in the paper furnish. This uniformity allows for more stable refining, consistent quality, greater control, and softness in the final product. Innovation at Suzano goes beyond the technical aspects of the fibre itself: we combine advanced fibre properties with cutting-edge technology, logistics excellence, and end-to-end services to provide our customers with reliable supply and lasting value.

Among the most significant breakthroughs we have achieved is the development and scale up of pulps with superior mechanical properties within our Biopulp products, called the Eucastrong family, which has been proven to be a great tool for increasing BEKP in the furnish while optimizing strength. The higher fibre population and flexibility of eucalyptus also allow for increasing the softness of tissue paper, while requiring reduced energy

**Share in World Bleached Chemical Pulp Demand (%)**



**Figure 1:** Accelerating trend to BHKP consumption<sup>1</sup>.

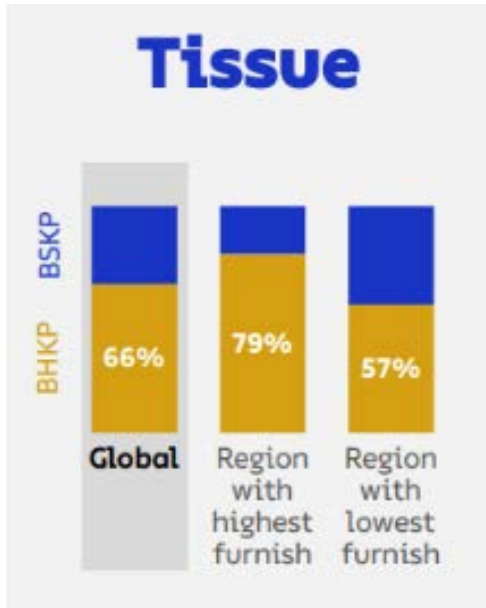


Figure 2: Fibre furnishes in global tissue market and regional differences<sup>2</sup>.

We provide recommendations on suitable blends from our pulp product portfolio, with our Eucasmart, Eucanatural and Eucastrong products offering particularly useful attributes for tissue manufacturers.

inputs and developing tensile strength at higher levels when properly refined under low intensity.

However, these benefits are not equally distributed geographically (Figure 2). There remains a significant gap between regions with the highest and lowest inclusion of BEKP, with countries such as Brazil and China reaching 100% for several grades, while maintaining efficient running of machines and high quality levels in finished products.

Closing this gap represents a clear commercial opportunity for the industry. The key questions are as follows: how can this shift be accelerated, what are the barriers to doing so, and which technical criteria need to be met?

Following our own learnings from reaching 100% BEKP content in tissue production while maintaining high quality and operational efficiency, we have developed several tools to help our

customers overcome the technical and operational challenges that can come when changing recipes to increase proportions of eucalyptus, from wet end to converting.

These are now packaged together into an end-to-end services model, which includes paper machine furnishes diagnosis, samples and paper benchmarking, assistance with pilot and industrial-scale trials, and software simulations. We also provide recommendations on suitable blends from our pulp product portfolio, with our Eucasmart, Eucanatural and Eucastrong products offering particularly useful attributes for tissue manufacturers. These have allowed our customers to enhance tissue quality, providing consistency, smoothness and softness while maintaining machine runnability.

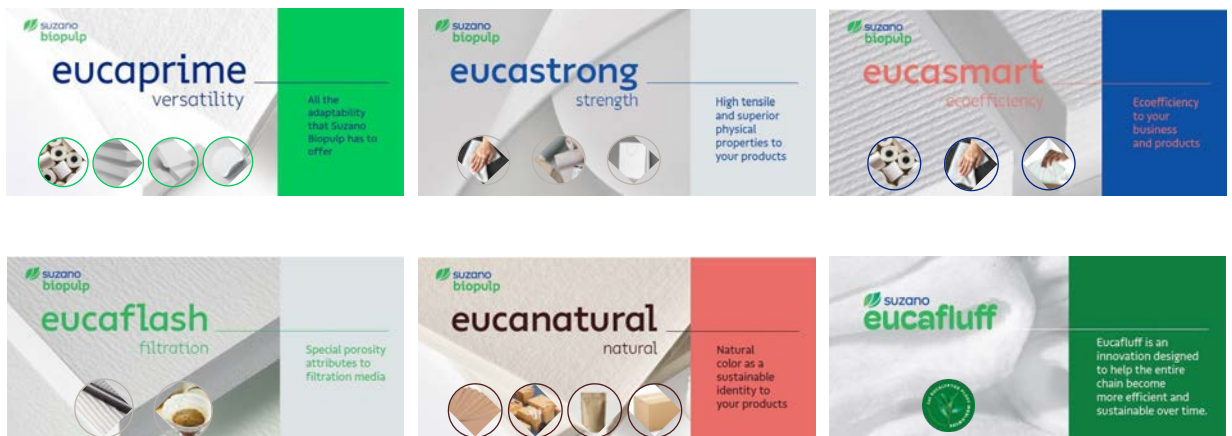


Figure 3: Suzano’s pulp product families. Source – Suzano’s internal data.

PROPERTIES	BEKP EucaStrong added				
	Initial furnish (reference)	50% SW substitution	100% SW substitution	100% BEKP With 30% EucaStrong	With 100% EucaStrong
	30% SW REF 70% BEKP UNREF	15% SW/15% BEKP CO-REF 70% BEKP UNREF	30% BEKP REF 70% BEKP UNREF	30% EucaStrong REF 70% BEKP UNREF	30% EucaStrong REF 70% EucaStrong UNREF
Basis weight	21,9	21,6	21,7	21,5	21,5
Caliper 1 ply	314	315	332	310	324
Strength MD	85,5	83,9	89,4	100,6	99,1
Strength CD	54,6	53,9	51,6	66,6	68,8
Strength GMT	68	67 (=)	68 (=)	82 (+)	83 (=)
Softness TSA	82,7	83,9 (=)	83,1 (=)	82,8 (=)	86 (+)

REF = REFINED  
UNREF = UNREFINED  
CO-REF = CO-REFINED

Co-refining BEKP/SW = Similar GMT and Runnability results as reference

100% BEKP = same quality results in GMT but Runnability impacted

30% BEKP EucaStrong = +20% GMT strength and same softness. Runnability improved but still impacted

100% BEKP EucaStrong = +20% GMT strength and higher softness. Runnability recovered

Figure 4: Results from pilot study into shift to 100 percent BEKP. Source – Suzano’s internal data.

In our experience, we have found that with services support, many trials resulted in manufacturers being able to increase BEKP in furnish by an additional 5-10%, even for those already running with furnishes near to 80% BEKP.

**CASE STUDY: MOVING TOWARDS 100% BEKP**

It was once considered impossible to adapt TAD production lines to integrate high levels of BEKP. In our recent work with customers, at both pilot and industrial scale, we are now proving that this is not only technically achievable, but also profitable.

We supported an application study recently on a pilot using TAD technology, to explore how to move from 70% Eucalyptus and 30% NBSK bath tissue paper, to a 100% BEKP recipe.

The study started with pilot trials, and during the trial period, several alternatives were explored that included changes to refining configurations and the usage of one of the Eucastrong family of products, aiming to understand sheet properties and machine runnability.

This found that it was possible to successfully substitute either 50% or 100% of softwood content (15% or 30% of the total furnish), according to Figure 4, by using specific refining strategies and different types of eucalyptus in the recipe. In both scenarios, sheet properties were maintained or improved, with no impacts on runnability when integrating refined Eucastrong BEKP into the recipe.

These pilot results enabled the move forward to industrial trials, understanding how this could be

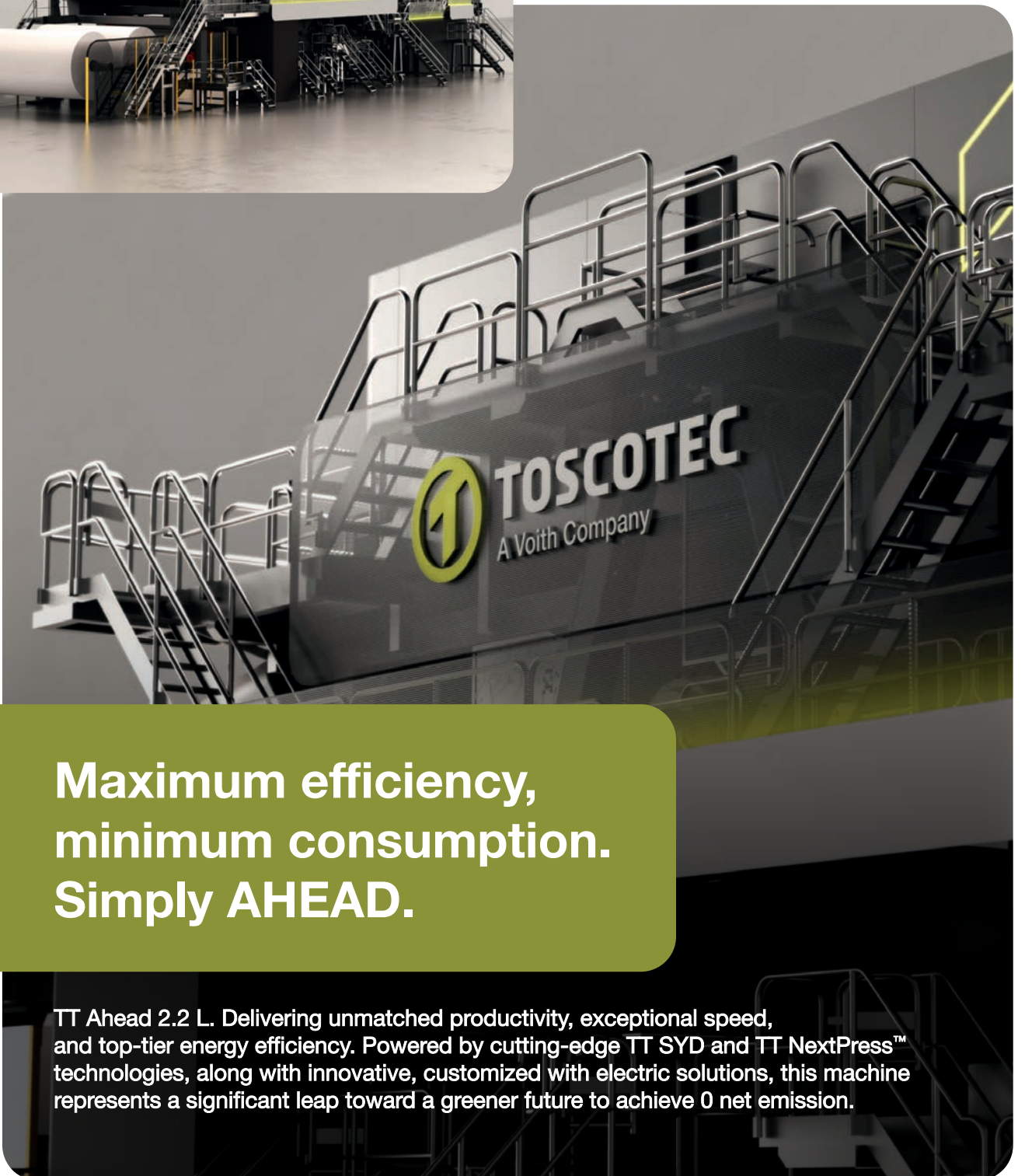
applied in a commercial context. This was done using a TAD machine running bath tissue, partially substituting softwood furnish with Eucastrong alongside a lower specific edge load (SEL) in the refining for both the hardwood and softwood lines. This resulted in a total content migration of around 10%, creating significant long-term cost savings and enhanced profitability by reaching a total furnish content industrially of around 90% BEKP in total.

The fibre transition in tissue is more than a technical adjustment. It is a pathway to a more competitive, efficient, and sustainable industry. Innovation is a key enabler of this journey, ensuring that the benefits of eucalyptus pulp can be shared more broadly across regions.

*This article was written for TWM by Suzano’s Pablo Cadaval Santos, Research and Development Director, and Heloisa Ramires, Research and Development Executive Manager.*

<sup>1</sup> Pulp and Paper Products Council, “Monthly Reports and Forecasts,” Jan.2025, Proprietary chart: Share in World Bleached Chemical Pulp Demand, 2013-2024.

<sup>2</sup> Fisher International – FisherSolve Next, Version 2025.1, proprietary database, Jan.15, 2025.



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# IF KEY PERFORMANCE INDICATORS ARE NOT DRIVING IMPROVEMENT THEY ARE A WASTE OF TIME AND MONEY

Most critical metrics that quantify best energy practice are just numbers for the sake of having numbers, says AFRY Management Consulting. Its report for TWM provides answers. By Tom Karlson, Group Manager/Global Division Industry, and César Nuez, Director Zaragoza.



**W**e work with industrial clients to improve how performance is measured and managed. Drawing on extensive experience in energy-intensive sectors, we often see that while Key Performance Indicators (KPIs) are widely used, they rarely lead to meaningful changes, especially in the case of Energy Performance Indicators (EnPIs).

In this article, we share our insights on how to design EnPIs that do more than fill dashboards – EnPIs that actually drive operational efficiency and sustainable improvement.

All organisations use KPIs to monitor, evaluate, and improve their efficiency and operations.

Within the framework of ISO 50001, KPIs are called Energy Performance Indicators, and they are supposed to serve as critical metrics that quantify energy performance relative to key variables such as production output, operating hours, or environmental conditions.

## 1. THE PROBLEM WITH TRADITIONAL METRICS

The problem is that most EnPIs out there are just numbers for the sake of having numbers for the energy management system. They look nice in reports and dashboards, but when it comes to actually driving improvement, they often miss the mark. Too many companies track energy per unit produced or monthly kilowatt-hours without ever asking: “So what?”

If the data doesn’t lead to action, it’s basically a waste of time. A real improvement needs real insight—not just metrics that sit in spreadsheets gathering digital dust.

We who work with reporting energy efficiency tend to spend a significant amount of time explaining why the progress with our EnPIs is what it happens to be. This time could be used for doing something more productive.

We keep trying to define optimisation and operational improvement using broad, global EnPIs—like total energy per ton produced—as if they hold all the answers. But the truth is that those high-level numbers are too vague to tell us what’s really going on.

In short, most of the EnPIs do not fulfil the criteria for a good KPI—which are that ENPIs should:

# Steam consumption EnPI for BM 2 Mill X



Total Savings Potential

Savings potential for process departments calculated using the model...



Dryer Sum Saving Potential

➔ Gå till grupp EE Ope Dryer



Stock Preparation Saving Potential

➔ Gå till grupp EE Ope Stock Prep



Dryer Sum Saving Potential

...and support to operator to what (s)he should do.



WW at ref Vaule

📌 -0,0693 t/h

📌 Temp vatten inloppslåda BS - GRADER C



Humidity at ref vaule



End cond load at ref value

- Give answers by translating raw energy consumption data into information on what actions they should take;
- Be relevant for the person using the EnPI which means that they must be able to influence it;
- Provide timely information so actions can be taken at the right moment;
- EnPIs need to be used.

## 2.SHIFTING THE FOCUS: SMARTER INDICATORS

As discussed earlier, our four favourite criteria for a good EnPI are the following:

- Gives answers;
- Relevant;
- Timely;
- Must be used.

In an ideal world, EnPIs should be defined at different organization levels and serve different purposes according to the receiver of information and type of measurement.

The reason for having different levels on EnPIs is that what is "relevant" depends on the role one has within an organization. Only EnPIs that one can actually influence are really "relevant".

It is important to remember that there are also other stakeholders who need information on energy consumption—for example, for cost allocation and similar purposes—but these are not considered proper EnPIs and are therefore not addressed in this article.

Let's consider these four criteria one at a time, starting from the last one:

### Must be used

It is easy to understand that even if we have the most perfect EnPI, it is of no use if nobody follows it.

Ways to achieve success:

1. Involve the "customers" of the EnPIs early on in the process.
2. Choose tools for both following up and reporting that are easy to use.
3. Establish routines on how EnPIs are followed up and how corrections to the process, operation, and/or EnPIs are executed.

From the start, it's essential to involve the people who will use these indicators in their day-to-day decision-making. These internal stakeholders—whether in operations, sustainability, or quality management—understand the nuances of their work and can help shape indicators that are both practical and aligned with business goals. When stakeholders recognize that the indicators reflect their actual needs, they are far more likely to use them effectively and contribute to continual improvement.

Equally important is choosing tools that make EnPI tracking and reporting seamless. Simple, intuitive platforms encourage routine interaction with data, making it easier to detect trends and take action. It is needed that not only energy data are available in the tool but also influence factors.

### Timely

Retrospective monthly reports are only that useful. It is difficult to achieve the best possible results if we get information of poor performance with an average of two weeks of delay especially. There are two ways of making the information more useful:

1. Using a time machine and/or
2. Having the information available in real time.

The Technology Readiness Level (TRL) of IT tools showing process values in real time is much higher compared to the TRL of time machines, so we recommend starting with IT tools.

### Relevant

EnPIs are not really relevant if they do not have a significant impact on the performance you are trying to measure and/or if you cannot influence the outcome. EnPIs need to be designed at different levels in the organization, so they are relevant to the receivers.

The vanilla versions of specific energy consumption (SEC), e.g., kWh/ton, fail to meet this requirement. Different products need different amounts of energy in order to reach the product specifications. It is highly unlikely that it would be acceptable to refuse production of a certain product in order to meet the energy efficiency targets.

### Give answers

As we all know there are plenty of factors that influence the SEC—and this is the reason why we often fail to get any answers when monitoring the SEC. Instead of answers we have plenty of questions: the SEC might have increased due to colder temperatures outside, lower Overall Equipment Effectiveness (OEE) on our processes or any other of the factors that influence it.

**It's essential to involve the people who will use these indicators in their day-to-day decision-making. These internal stakeholders understand the nuances of their work and can help shape indicators**



One way to address this is to follow ISO 50006 (Measuring energy performance using energy baselines (EnB) and energy performance indicators (EnPIs) — General principles and guidance), identify the relevant variables, and normalize the KPI/EnPI accordingly (see ISO 50006 for details). Unfortunately, in our industry, this method often does not take us very far.

All too often, we lack the means to measure all the relevant factors and if we cannot measure these variables, then we cannot truly model them by using statistical methods. Our statistical models are therefore not complete, which makes it extremely difficult to make well-informed decisions based on the data we can get from the typical EnPIs.

Should we give up using energy consumption as basis for monitoring energy efficiency? The short answer is no, but we need to be aware that just measuring specific energy consumption is typically not a good EnPI.

The good news is that there might be an easier way of crafting a good EnPI, e.g., by measuring wasted energy instead of consumed energy!

## 3. LOOKING AHEAD: KEY PRINCIPLES

### How to measure wasted energy?

There are numerous methods available to measure wasted energy in industrial processes, ranging from straightforward calculations to complex data-driven models. However, it is often most effective to adhere to the KISS principle – Keep



It Simple, Stupid – which advocates starting with the simplest viable approach. In this context, that means beginning with first-principles models. These models are rooted in fundamental physical laws, such as mass and energy balances, and they offer a transparent, consistent, and theoretically sound framework for identifying inefficiencies. They are especially useful for gaining a deep understanding of the process and for pinpointing where and how energy losses occur.

Only in cases where first-principles models are insufficient – either due to limitations in available data, the complexity of the system, or the dynamic nature of certain processes – should one consider moving toward more sophisticated statistical or machine learning models. While these approaches can be powerful, they often require significant amounts of high-quality data, and their outputs may be more difficult to interpret or validate without a strong physical basis. Also, as discussed earlier, we often lack reliable sensors that can monitor significant variables affecting the EnPI we so desperately want to have.

Exhaust air from the Yankee hood is a good example of a process parameter that provides a clear indication of overall process efficiency. We can be sure that we are wasting energy if the humidity level and/or temperature level are off. It is often relatively easy to develop a Standard Operating Procedure for operators to follow so that the EnPI based on these parameters can be adjusted to a reasonable level.

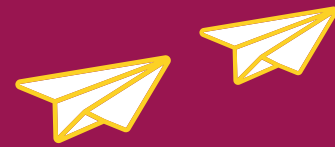
Another best practice that tends to work well with EnPIs is to try and monitor savings potential in kWh and aggregate them from individual processes

to department levels and so on. It becomes much easier to prioritize the operational improvement work when it is easy to see where we have the biggest losses in our processes.

We believe in combining engineering fundamentals with modern tools in a pragmatic and effective way. With decades of experience in energy-intensive industries, including pulp and paper, we help our clients improve energy efficiency by selecting the right methods for the task – prioritising clarity and accuracy without unnecessary complexity.

**There are numerous methods available to measure wasted energy in industrial processes, ranging from straightforward calculations to complex data-driven models. However, it is often most effective to adhere to the KISS principle – Keep It Simple, Stupid**





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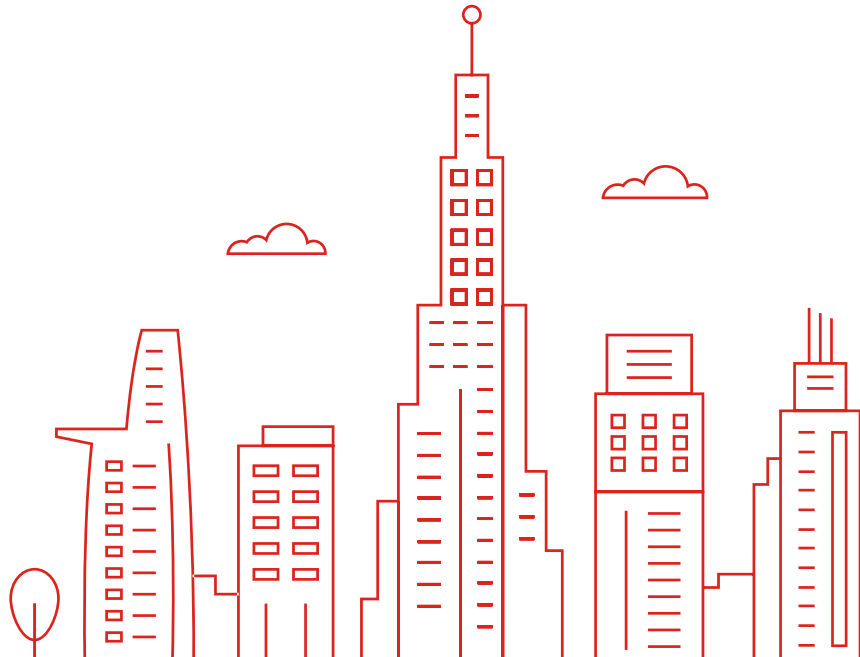
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