

# TWM

TISSUE WORLD MAGAZINE

The independent news  
provider for the global  
tissue business

## PANDEMIC SPECIAL EDITION

TISSUE SALES SURGE  
ACROSS THE GLOBE

Plus ...

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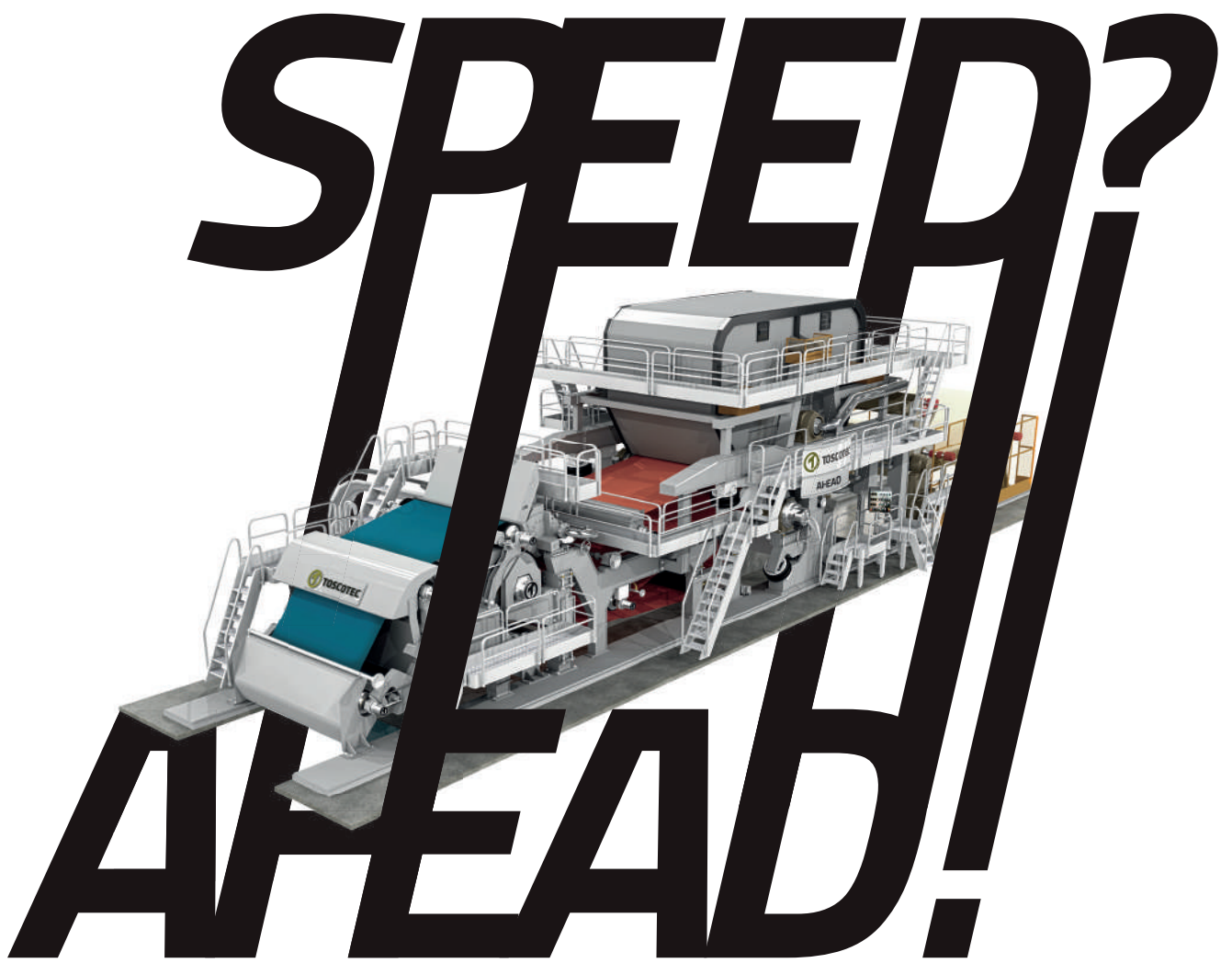
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Cover: The panic buying and stockpiling of toilet paper soars following the world-wide outbreak of Covid-19. Image by Contrast Creative, Manchester, UK





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#### EDITORIAL HEADQUARTERS

##### Informa Markets – Singapore

10 Kallang Avenue, #09-16 Aperia Tower 2, Singapore 339510  
Tel: +65 6233 6688 Fax: +65 6233 6633

##### Deputy Event Director & Publisher

Agnes Gehot: [agnes.gehot@informa.com](mailto:agnes.gehot@informa.com)

##### Senior Editor

Helen Morris: [helen.morris@informa.com](mailto:helen.morris@informa.com)

##### Executive Director

Chris Kilbee: [chris.kilbee@informa.com](mailto:chris.kilbee@informa.com)

##### CEO

Margaret Ma Connolly:  
[margaret.connolly@informa.com](mailto:margaret.connolly@informa.com)

#### ADVERTISING ENQUIRIES

Italy, Germany & North America  
Silvio Arati

T: +39 02 4851 7853  
[sarati@studioarati.it](mailto:sarati@studioarati.it)

South and Central America

Selma Ugolini  
T: +55(11)99904 5350  
[selma@gova.com.br](mailto:selma@gova.com.br)

China, Hong Kong & Macau

Jennie Zhan  
T: +86 20 86660158  
[info-china@informa.com](mailto:info-china@informa.com)

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Please send address corrections to:

Informa Markets – Singapore.

10 Kallang Avenue, #09-16 Aperia Tower 2, Singapore 339510  
Tel: +65 6233 6688 Fax: +65 6233 6633  
[info@tissueworld.com](mailto:info@tissueworld.com)

Subscription online at

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



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# OUR FORMIDABLE ARMY OF PROFESSIONALS HAS GEARED UP TO MEET UNPRECEDENTED CHALLENGES ... AS TISSUE BECOMES A 'STRATEGY ASSET'

Helen Morris

Senior Editor, Tissue World Magazine

**W**e are enduring extraordinary times. It seems unreal that a pandemic of such tragic consequences was unthinkable just a few months ago.

Before the relative consumer calm recently established, panic buying of essential products stripped the shelves bare. Tissue is a top must-have.

In Hong Kong, knife wielding robbers attacked a tissue delivery man to seize 600 toilet rolls ... their value HKD1,695, US\$218, £167. In Australia, two men threatened a supermarket employee with a knife, for 500 rolls. In Germany, a famous tissue supplier's three trucks were hijacked.

In stores, scuffles broke out over the last pack of toilet roll. Rationing was introduced. Customers grabbed their limit, and headed off to other stores to top up. Lockdowns were imposed with varying degrees of success, so online shopping soared. Websites crashed under the increased traffic and stores stopped new customers registering. New delivery personnel were brought in and orders successfully placed failed to turn up. There were reports of thefts on route.

At the time of writing, a measure of demand and supply-side balance has been reached. In this edition of TWM – online only out of understandable necessity - a seven page Pandemic Special Report looks at the shockwaves which rolled across the industry in all its sectors. In China, the virus forced mill closures. Larger companies in major tissue regions kick-started PMs that had been closed earlier under restructuring. Elsewhere, including in North America and Europe, mills mobilised all reserve capacities.

Sales curves rose sharply. A small sample, again at the time of writing: in the US, the No. 2 company registered a 5,000% online increase; in Australia, Who Gives A Crap's chief executive Simon Griffiths charted sales five times higher; in the UK, Bumbo's Fay Pottinger, trading for just seven months, reported sales going "crazy," up 325%; one eBay trader asked £84.99 for a 72-pack of Andrex toilet rolls – triple its retail price; and two-weekly sales of toilet rolls at Essity's Salford, UK depot, rose from 24m to 63m.

And the response, again a small sample: Kruger Products's chief executive Dino Bianco says: "In my 30 years in the grocery and CPG industries, I have witnessed how strong and resilient these industries are."

Better All Round/Consuma Paper Products's founder and chief executive Oday Abbosh says: "It is frantic ... everyone has been taken aback by the speed with which it has accelerated worldwide. However, there have also been huge positives. The way retailers, our industry and our employees have all stepped-up is fantastic and brings immense pride."

A "banner year for tissue" is in prospect, says Fastmarkets RISI's Esko Uutela, principal, tissue, who goes on to weigh the likely downside of the projected hit taken by AfH sales as bars, pubs, clubs, restaurants and hotels remain shut, even as some restrictions begin to be eased. What of the future post-pandemic? Consumers have been taken a long way out of their comfort zones, and the global economy is facing a severe shock the size of which will only unfold in time.

TWM examines the impact on tissue from all angles: the 'banner year' for demand, the industry response, the likely progression through the remaining months of pandemic, and looks ahead to the landscape once things return to normal.

It is not going to be the same normal. Product loyalties will have shifted, new favourites found, shopping routines changed, production techniques tested under extreme pressure, new advances found. The rise of e-commerce will continue.

Part of that new 'normal' seems certain to be a looming Millennial cultural shift beginning in tissue's top nation. Jason Ojalvo, CEO of Tushy, a US bidet company founded in 2015, reports that in the first week of March he saw sales doubled over the previous month, then tripled, and then 10 times increased until a peak of 1,000 units per day. San Francisco-based Brondell Inc. at one point was selling a bidet every two minutes, or 1,000 units a day.

For now, TWM's important wish for all: "Stay Safe."

# PANDEMIC SPECIAL

TWM interviewed tissue mills and industry insiders to get their views on how the pandemic is impacting the tissue market – and their forecasts for the future

**T**he world's tissue industry is bracing itself for further substantial production increases following the world-wide outbreak of Covid-19. The sudden surge in demand – which, at the time of publication, has most likely not yet peaked – will also likely see a subsequent fall-off.

Even during the present surge, the AfH sector is especially hard hit as many nations shutdown social activity as restaurants, bars, flights and hotels temporary close down to adjust and safeguard citizens.

**Essity:** Its Salford, UK-based tissue facility sold 63m toilet rolls in the first two weeks of March – compared to 24m the same time a year earlier. It emphasised the resilience of its supply chain and urged consumers not to panic-buy and be community-minded. A spokesman told TWM: "We have seen increased demand globally for our consumer products, that is toilet paper, household towels, baby diapers, feminine care, and incontinence care products.

"We don't have any issues meeting these demands. Already in January we saw an expected increase in demand and the risk of production disturbances and started to take measures. At the moment, we have no major disruptions in production, for any of our products, due to the Coronavirus. In China, where we operate through our subsidiary Vinda, all production is up and running, also in Hubei Province."

**Kimberly-Clark (K-C):** K-C told TWM that it wants to assure consumers it is "doing our best to ensure a steady supply of product to stores". It said: "K-C is working closely with our retail partners and customers to understand their current needs. We have plans in place to address the increased

demand for our products to the extent possible, including accelerated production and reallocating inventory to help meet these needs.

"We will continue to make adjustments to our plans as necessary. In addition, the health and safety of our people is our top priority, and K-C has taken extra steps to keep our people and their families safe and healthy. These measures include enhanced safety measures for our office, mill and distribution centre operations, which were developed in line with guidance from global health authorities. These plans also help ensure the continued supply of our essential products."

**UK-based Leicester Tissue Company:** Frank Millward, sales and marketing director, said: "We are seeing a substantial uplift in demand – in some cases 300% + based on EPOS till sales. This panic buying is unfortunate as it is placing heavy and quite unnecessary demand on manufacturer, hauliers and retailers alike – hence most are now rationing.

"At the moment, we are coping well. We are all hoping and perhaps expecting that having now stockpiled – the majority of shoppers will settle down to a more normal and predictable shopping pattern soon."

**UK-based Poppies Europe:** Armino Marque, partner and technical director, told TWM: "Business wise, we are now bracing for impact. Although toilet tissue madness has artificially boosted our sales for the time being. But we are now taking the necessary measure to adjust and see it through."

**Kruger Products:** The company said it was working hard to make sure people have what they need during this fast-changing and challenging time. Its eight facilities across North America are working at full capacity

and optimising production to work with their customers to stock tissue products. The company's fibre and other materials are primarily sourced in North and South America. It added: "The supply of materials is strong and we do not anticipate any product supply issues."

Dino Bianco, chief executive, Kruger Products, said: "Our production facilities are among the cleanest and most sanitary of any manufacturing, given the nature of our products. We have enhanced our employee health and safety protocols. And only employees and those deemed critical are permitted to enter these facilities. Anyone wishing to enter is subject to screening.

"In my 30 years in the grocery and CPG industries, I have witnessed how strong and resilient these industries are, and how committed they are to making sure people have the essentials. While this is a unique situation, these industries are pulling through and have the supply to keep food and products moving."

**Clearwater Paper Corporation:** It is closely monitoring the rapidly evolving Covid-19 situation. The company said it was also experiencing "a significant increase" in demand for its retail tissue products and an increase in demand for paperboard used for packaging food and pharmaceutical products. It is focused on ensuring continuous operations to serve its customers' demand for these essential goods. Clearwater Paper's facilities are "currently producing as usual," it added.

**UK-based Better All Round/Consuma Paper Products:** Oday Abbosh, founder, chief executive, and owner, told TWM: "It is frantic. In reality, everyone has been taken aback by the speed with which it has accelerated worldwide. Panic buying has put immense pressure on the supply chain and we will have to see what the ramifications will be in relation to weakening currencies. However, there have also been huge positives. The way retailers, our industry and our employees have all stepped-up is fantastic and brings immense pride. Looking after our people and serving our customers remains our priority

**EVEN DURING THE PRESENT SURGE, THE AFH SECTOR IS ESPECIALLY HARD HIT AS MANY NATIONS SHUTDOWN SOCIAL ACTIVITY AS RESTAURANTS, BARS, FLIGHTS AND HOTELS TEMPORARY CLOSE DOWN TO ADJUST AND SAFEGUARD CITIZENS.**

and we are doing everything we can to look after everyone. We are also grateful to our brilliant suppliers who have also stepped up big time to ensure continuity of supply."

He added that given the "unprecedented times", Consuma has taken the step to open up its supply chain expertise and resource to help businesses that might, in other times, be considered competitors.

He said: "We've done this in order to help the industry as a whole meet the extraordinary levels of demand faced by retailers. To this end we've facilitated a selection of competitors – including those whose supply included away from home destinations – to quickly pivot sales to some of our key retail partners.

"With factory production capacity at its max for many suppliers, retailers have been looking for ways to increase their supply. The challenge has been in finding a way to do this without the wider supply chain infrastructure – e.g sales, ordering and invoicing – already being in place.

"By opening up components of the Consuma supply chain to third parties, we have been able to get products into store quickly and easily on behalf of all parties and create a win win situation for all. This collaborative effort brilliantly demonstrates how our industry can come together if necessary."

**"IN REALITY, EVERYONE HAS BEEN TAKEN ABACK BY THE SPEED WITH WHICH IT HAS ACCELERATED WORLDWIDE. PANIC BUYING HAS PUT IMMENSE PRESSURE ON THE SUPPLY CHAIN AND WE WILL HAVE TO SEE WHAT THE RAMIFICATIONS WILL BE IN RELATION TO WEAKENING CURRENCIES."**

**Spain's L.C. Paper:** Chief executive Joan Vila told TWM: "The economic situation resulting from the Covid-19 pandemic is extremely complex. The main market for L.C. Paper is AfH, which comprises clients like hotels, restaurants, airports, schools, colleges, hospitals... Except for hospitals, the rest of the market has stopped dead, so most of our clients from those areas have disappeared abruptly. This has profoundly affected our PM2 production line.

"To cope with that situation, we have rescheduled the vacations for our workers and reformulated the organisation of shifts to temporarily decrease the production figures, while we are awaiting the restart of the AfH market. That is something that we don't expect until almost the end of 2020 both in Spain and in the rest of the world, while we believe Spain will be particularly affected.

"On the other side, regarding our PM3 production line, we have replaced the market loss from the AfH sector with a sharp

increase in production of jumbo rolls for the consumer market, helping other well-established companies to overcome the huge increase in demand.

"The crisis stemming from the pandemic has been an opportunity for us to anticipate the introduction of an important product for our future strategy: the toilet and towel rolls with unbleached pulp, a quality we call "Nature", with cardboard packaging. In addition, it has also reinforced the e-commerce channel, where we already had an important presence. We believe that some of the e-commerce increase will be permanent even after the end of the pandemic.

"In moments of crisis like the current one, we believe the most important value is resilience: the ability to adapt swiftly to the new moments of the economy. That is an area where I am convinced that our company will excel."

## ANALYSIS: INDUSTRY INSIDERS

**As the world is set for recession, this is shaping up to be a banner year for consumer tissue producers. Bathroom product sales tripled, mills on full capacity, extra shifts for converting, store prices jumped 8.6%, but AfH to take a major hit in months ahead. What does the Covid-19 pandemic mean for the global tissue business? Report by Fastmarkets RISI's Esko Uutela, principal, tissue.**

There is only one really hot topic discussed everywhere in the world: the Covid-19

pandemic and its consequences on daily life, freedom to move, employment, operations and liquidity of companies, and the global economy as a whole – which is undoubtedly entering a recession, although it is difficult to estimate how deep the downturn will be. In the following, I will discuss in a bit more detail what has happened and what we might expect in the coming months in the global tissue business. Covid-19 will have distinctly different consequences on the consumer and AfH tissue sectors. But to start, let's focus on China, where the virus was found, and the Asia Pacific region as a whole, before continuing to Western Europe and North America, the latecomers to the coronavirus scene.

At first, many mills in China were forced to close, including all mills in Hubei

Province. This took place as an extension of the Chinese New Year holidays, which started around January 25, or even slightly earlier with downtime taken at mills. Hubei Province is not a major hub of Chinese tissue production, accounting for less than 5% of Chinese tissue capacity, although some of the largest players, such as APP, Vinda Paper, C&S Paper and the Shanghai Taisong Group, have mills there. But the closure of mills in Hubei disrupted the supply chains just as consumers rushed to purchase toilet paper. In response, Vinda Paper reopened an older PM at its oldest mill in Guangdong that had been closed in mid-2019 to replace part of the lost production in Hubei.

Elsewhere in the Asia Pacific region, the developments in China caused worry in areas that source a major part of their tissue

MI



**Esko Uutela**  
Principal, tissue, Fastmarket RISI



## ON 14 MARCH, C&S PAPER RESTARTED ITS 140,000 TONNE PER YEAR TISSUE PAPER MILL IN XIAOGAN, A MAJOR TISSUE PRODUCTION HUB. TOP PRODUCERS APP CHINA AND VINDA INTERNATIONAL HAVE ALSO RECOMMENCED PRODUCTION AT THEIR TISSUE PAPER MILLS IN XIAOGAN, WHICH HAVE CAPACITIES OF 240,000 TONNES PER YEAR AND 300,000 TONNES PER YEAR, RESPECTIVELY.

supply from China, such as Hong Kong, Macao and Australia. People started panic buying toilet paper there as well. Violence erupted, with customers fighting for the last pack of toilet paper.

In Australia, the largest retailer, Woolworths, began to restrict how many packs of tissue a single customer was allowed to purchase. The other leading retailers in Australia, Coles, Aldi and Costco, soon followed Woolworths in rationing toilet paper purchases. And in Hong Kong, a lorry loaded with toilet paper was hijacked—a situation that would have been difficult to imagine just a few months ago. Is toilet paper a strategic asset?

In Asia, thanks to radical restrictive measures, China, South Korea and Singapore have been able to stop the massive spreading of the infection, although not totally stopping the pandemic. In China, with the number of new cases falling sharply in March, local authorities began to allow businesses to reopen from March 10 on the condition that sufficient protective measures against the virus, including masks for personnel, were in place. The pulp and paper industry has gradually recovered from the prolonged stoppage.

In Hubei, roadblocks have been removed, allowing trucks and cars through, and in late March travel restrictions on Hubei residents, excluding Wuhan, were lifted. For the capital city, and elsewhere in China, people are allowed to enter but not to leave until 8 April. On 14 March, C&S Paper restarted its 140,000 tonne per year tissue paper mill in Xiaogan, a major tissue production hub.

Top producers APP China and Vinda International have also recommenced production at their tissue paper mills in Xiaogan, which have capacities of 240,000 tonnes per year and 300,000 tonnes per year, respectively. But Shandong Chenming's mill in Wuhan, including one 60,000tpy tissue PM, remains shut without a set date for reopening.

China is the world largest exporter of tissue. One might expect that tissue exports

suffering substantially from the increased domestic buying and mill closures. But export statistics for January-February 2020 show only a minor decline of about 5,000 tonnes (3.7%) in exports compared to the same period last year. This was a major surprise to me and certainly for many others as well.

Another issue is the influence of ongoing expansion projects in China. In early January, there were announcements about new local PM start-ups, but as is normal, during the Chinese New Year holiday there no new PMs started up. In February, there were practically no announcements of new capacity, and only in March they started to come again. Projects with Western equipment will likely be harder hit than for projects with deliveries by domestic machinery manufacturers.

On our project list, Andritz has four large PMs, two for Oji Nepia and two for the Shanghai Taison Group, Valmet two PMs for APP, and the PMP Group at least six PMs for APP and a couple more for the Hebei Yusen Group. All these suppliers have subsidiaries in China, but the start-up team normally also includes leading technical experts from the home countries. We expect that several of these projects, if not all of them, will be delayed by at least a couple of months because of the coronavirus.

As the virus spread to other regions, so did the panic buying and hoarding of tissue. Retailers in North America and Europe also found it necessary to limit the amount of tissue purchased per customer to keep the shelves in their tissue aisles stocked. This was certainly not bad news for tissue mills, which ultimately mobilised all their

reserve capacities to respond to the sudden demand peak. Consumer tissue mills in North America and Europe have been running at their capacity limits for the past couple of weeks.

In Germany, three trucks that belong to a famous tissue supplier with one of the country's oldest brands were hijacked by people desperate for toilet paper. Sales of toilet tissue exploded; in Germany, for example, toilet paper purchases were more than three times the normal level in calendar week 12 (16-22 March), the third week in a row of above average sales. Mills reported full capacity utilisation and extra shifts for converting were organised, and the demand for additional parent roll purchases picked sharply up.

In North America, the influence of the Covid-19 pandemic started slightly later, so the effects on the tissue business in February were moderate. But in early March, everything changed. Retailers from Walmart to smaller stores saw their tissue aisles empty of toilet paper, online sellers, who are now accounting for about 11% of US tissue sales, led by Amazon, were rapidly wiped out, leaving their web sites with comments like "article available soon."

Tissue mills have responded and are working at their capacity limits. We expect that capacity utilisation in March was very high at an estimated 98-99%. Reports from mills from New Jersey to Oregon and converters support this expectation (see the March issue of the US Tissue Monthly Data for more details).

For example, in Wisconsin, Georgia-Pacific (GP) saw orders for toilet paper and paper towels double, while demand for products at airports, hotels and other public venues softened, according to a local report. GP said its mills and distribution centres operated at 120% of capacity. Our North American news team reported last week that in terms of the surge-buying of toilet paper nationwide, one report, citing Nielsen data, showed toilet paper sales rose 60% in the week ending 7 March, and rising retail prices on store shelves as well.

## IN GERMANY, THREE TRUCKS THAT BELONG TO A FAMOUS TISSUE SUPPLIER WITH ONE OF THE COUNTRY'S OLDEST BRANDS WERE HIJACKED BY PEOPLE DESPERATE FOR TOILET PAPER. SALES OF TOILET TISSUE EXPLODED; IN GERMANY, FOR EXAMPLE, TOILET PAPER PURCHASES WERE MORE THAN THREE TIMES THE NORMAL LEVEL IN CALENDAR WEEK 12 (16-22 MARCH), THE THIRD WEEK IN A ROW OF ABOVE AVERAGE SALES.

At drugstores and major retailers, a report from IRI highlighted that toilet paper prices at stores jumped 8.6% in the week ended 8 March, an 18% increase in cost to consumers compared with the same week in 2019.

Consequences for the tissue industry differ by business sector. In summary, we expect disparate trends for consumer and AfH tissue. Tissue demand on the consumer side is booming in the short term, while the AfH business will likely turn sharply down as millions stay home to slow the spread of the coronavirus; however, deliveries in March continued based on orders from February. The next few months are expected to change the situation drastically.

Very little travelling, vacant hotels, restrictions on dining out, closed schools and people working from home instead of in offices are all factors that will depress demand in the AfH tissue segment in 2020, especially during the first half of the year. The only potential bright spot for the AfH segment is increased consumption by the medical industry.

Although this is a rather small AfH application, growth may be particularly high due to the demand for face masks and hospital clothing.

## CONSEQUENCES FOR THE TISSUE INDUSTRY DIFFER BY BUSINESS SECTOR. IN SUMMARY, WE EXPECT DISPARATE TRENDS FOR CONSUMER AND AFH TISSUE. TISSUE DEMAND ON THE CONSUMER SIDE IS BOOMING IN THE SHORT TERM, WHILE THE AFH BUSINESS WILL LIKELY TURN SHARPLY DOWN AS MILLIONS STAY HOME TO SLOW THE SPREAD OF THE CORONAVIRUS.

The consumer tissue business will see a few months of record sales, but then what? Will the trend continue? Could there be much less demand from retailers in two to three months, or will consumers keep their home stocks at higher levels than they had been?

This is shaping up to be a banner year for consumer tissue producers, but most likely home storage levels will slowly decline to near previous norms.

Consumer tissue is likely to experience a slower second half, or at least a slow last quarter, partly offsetting the peak demand during the first half, while the AfH business could see a rebound toward the end of the year.

For raw material suppliers, pulp mills and recovered paper companies, the outlook is also very different. There will be a demand

peak for pulp, especially hardwood pulp, by tissue mills that is likely to last to the third quarter or so.

But for recovered paper, while it is very likely that AfH tissue mills have less demand, the supply side will suffer much more as the main high grade deinking grade, sorted office paper, will be in short supply as offices, schools and other generators of this resource close in unprecedented moves to slow the spread of the virus in the US and Europe.

*Esko Uutela, principal, tissue, is the author of Fastmarkets RISI's Outlook for World Tissue Business study, the World Tissue Business Monitor and the US Tissue Monthly Data. He works out of Fastmarkets RISI's EU Consulting office near Munich, Germany, and can be reached at: Tel: +49.8151.29193 or Email: euutela@fastmarkets.com.*

# USA TISSUE IN COVID-19 ENVIRONMENT: TEMPORARY UPTAKE IN RETAIL, TROUBLES IN AFH SECTOR

By Svetlana Uduslivaia, Euromonitor International's head of tissue & hygiene industry

MI



**Svetlana Uduslivaia**  
Euromonitor International's  
head of tissue & hygiene industry

As concerns over the containment of Covid-19 remain high on the agenda across countries, the impact is felt across industries and services, including tissue in both consumer/household realm and institutional spaces. In US retail, similarly to other countries, a spike in demand for toilet paper, paper towels and facial tissue has been well noted in the first quarter of 2020. While initially attributed to panic shopping, higher than usual demand lingers on as stay-at-home orders remain in place across the large part of the country, translating into the overall boost to the consumer tissue categories and expected somewhat better than initially expected growth in 2020.

However, it is also important to consider that the extent of economic fall out and

high rates of unemployment will place additional strain on many household budgets, with consumers rationalising further and potentially diminishing gains for categories like paper towels and facial tissue, with toilet paper serving as a substitute in view of depressed incomes.

Euromonitor International's macro model projects an overall 2% to 3% decline in value in consumer tissue and disposable hygiene in the US in case of a Covid-19 Deep Recession.

However, the spike in demand is not necessarily all good news for the key brands. Aside from being temporary, the uptake in demand sees shoppers choosing first and foremost cheaper private label as well as stocking large bulk lower cost

Toilet Paper: "Out of Stock" Items as a % of Available Online SKUs

Country	30-Jan	6-Feb	13-Feb	20-Feb	27-Feb	5-Mar	12-Mar	19-Mar	24-Mar
China	0%	0%	0%	0%	0%	1%	0%	0%	0%
France	5%	4%	4%	5%	5%	5%	7%	15%	14%
Germany	3%	4%	4%	2%	3%	7%	9%	35%	37%
Hong Kong, China	12%	68%	54%	n/a	70%	32%	40%	29%	39%
Italy	1%	6%	6%	4%	4%	5%	11%	21%	26%
Japan	8%	6%	6%	5%	7%	11%	27%	55%	49%
South Korea	0%	0%	0%	0%	0%	0%	0%	0%	0%
Spain	7%	2%	6%	3%	4%	5%	9%	17%	12%
United Kingdom	3%	9%	8%	9%	9%	11%	38%	38%	41%
USA	12%	12%	12%	13%	11%	14%	17%	35%	42%

packages at retailers like Costco as well as discounters. This buying will likely diminish gains branded tissue products made following the 2018 and 2019 price increases to recapture dwindling profit margins.

The effect of bulk buying and the further push of private label is likely to be compounded by macro-economic conditions as more consumers will likely turn to bargain shopping in the second, third and fourth quarter of the year due to the economic fallout of the Covid-19.

Interestingly but not surprisingly, in view of stock shortages and concerns over store visits, direct-to-consumer (DTC) tissue brands operating on subscription basis also see a significant increase in demand and the surge in the number of subscribers. It is unlikely that these brands will be able to retain all of their newly acquired customers as impact of pandemic wanes.

However, they are proving to be agile when it comes to inventory management and engage with customers on ongoing basis, also via popular social media channels, to build longer-term customer retention and acquisition strategies, in the wake of growth

in sales and brand awareness during the first quarter of 2020.

Brand dynamic aside, potentially causing longer-term disruption to demand in toilet paper is the shift in how consumers approach their bathroom routines altogether. The Covid-19 response is seeing further shifts in how consumer and industries across products and services are changing the way they handle their daily routines.

With respect to consumer tissue and bathroom routines, in the past couple of years we have been watching the rising demand for bidets in the US. Latest news indicate that companies operating in the bidet space saw a dramatic spike in demand and sales in the second half of the first quarter of 2020. As we consider long-term implications of Covid-19, we should consider how this particular trend can re-shape long-term tissue demand. Understanding disruptions that can last well beyond the pandemic times can help inform long-term strategies and open up room for innovation to secure future demand.

However, it is important to note that the impact of Covid-19 will be felt the most

and perhaps longest in the institutional settings. The disruption to travel, tourism, and business activities is leading to reduced demand for products distributed to AfH customers.

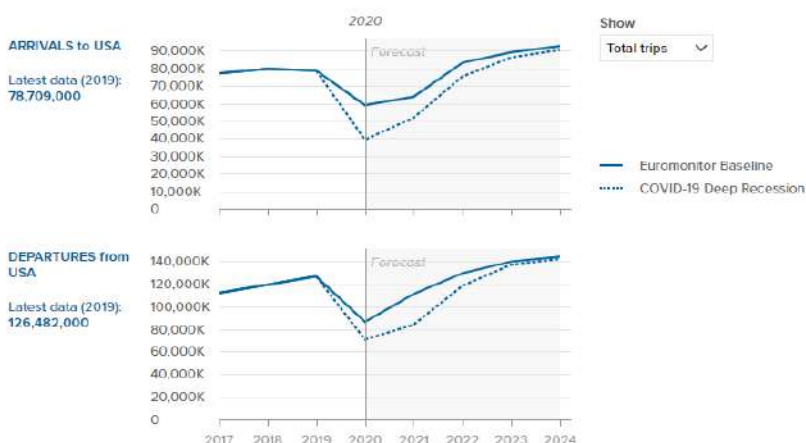
By the end of the first quarter of 2020, over 80% of foodservice outlets in the US have been closed, too, thus diminishing further demand for tissue products.

With fewer travellers and hotel stays, pause to foodservice operations, and stay-at-home policies the demand for AfH tissue products is affected unfavourably and will take time to normalise.

In fact, many industry suppliers in the US, as well as other markets, indicated that in the first quarter of 2020 over 40% of AfH consumption moved to at-home consumption. Normalisation of travel and tourism as well as foodservice will take time, especially in view of high unemployment and depressed disposable incomes.

While Euromonitor International's new preliminary projections for 2020 (to be released in late April) place the overall annual performance of the US retail tissue in upper single digits, AfH tissue will likely end the year on the opposite side of the spectrum with high single digits decline in both volume and value followed by slow recovery in 2021.

USA COVID-19 DEEP RECESSION SCENARIO FORECAST | Estimated probability: 25-35%  
Travel 2017-2024, Total trips





# POTENTIAL IMPACT ON COMMERCIAL HAND TOWEL DEMAND

Please wash your hands and dry them with a paper towel! By Bruce Janda, senior consultant, Fisher International

MI



**Bruce Janda**  
Senior consultant, Fisher International

As Dwight Eisenhower famously remarked: "In preparing for battle, I have always found that plans are useless, but planning is indispensable." General Eisenhower came long before this Covid-19 pandemic, but he understood the difficulty of planning with incomplete information. Having a plan, even if it involves wrong assumptions, provides the best understanding and ability to react to events that unfold. As we continue to navigate toilet paper-hoarding habits and disruptions in tissue production and distribution, the demand for public handwashing support in this new normal could increase significantly. This article will explore how that might drive changes in paper hand towel production and distribution as we come out of global lockdown and get back to business.

## How Clean Are We, Really?

The Covid-19 pandemic has brought a new focus on cleanliness and preventing the spread of disease through personal contact and contaminated surfaces. We have experienced epidemics like this in the past, but SARS, MERS, and ZIKA receive global recognition but only had a regional impact. Ebola caused worldwide concern. However, none of these events had enough global impact and personal disruption to significantly change Individuals' handwashing behaviour. Tissue makers focused on the commercial or the AfH market have long understood that hand washing and drying with a paper towel is an underserved market need. If people followed professional guidelines (as shown in Figure 1 from the Centers for Disease Control and Prevention) there would be a significant increase in paper hand towel demand. There are two problems

with this simple recommendation – not everyone washes their hands, and those who do rarely take the prescribed time to do so properly. A 2003 study by the American Society for Microbiology found 83% of women washed their hands after using the restroom, but only 74% of men did the same. And this isn't unique to the US as a British study conducted in highway service station restrooms, using electronic sensors to measure compliance found that 65% of women and 35% of men washed their hands.

There are many reasons why people don't clean their hands. It's probably most difficult in a medical setting (where washing is required after each patient interaction) than in food processing where the work is continuous. Frequent hand washing can irritate skin and cause potential infections. Public restrooms are not always clean and some try to get out as fast as possible without stopping at the sink. We don't know what life in the post-pandemic world will be like, but it's reasonable to expect some changes to our routines and behaviours that will be permanent. We are now very aware that soap and water destroy the virus with no need for anti-microbial additives. Hand sanitiser has some efficacy but isn't a complete answer to removing soiled material or killing other resistant germs like the gastrointestinal norovirus. So those in the tissue and towel industry have to ask themselves:

- What if this pandemic results in a sea-change in handwashing compliance and frequency?
- What if patrons of restaurants, hotels, and

truck stop all demanded better hygiene facilities?

- What if people started washing their hands after touching public handrails and buttons
- What if more people head to the washroom after arriving at a destination or consuming food or drink on the go?
- If hand washing habits truly change, how will we dry our hands?

The two common alternatives for tissue products when it comes to drying one's hands are cloth towels (typically used at home) and the dreaded air dryer commonly found in public restrooms. Most people start these air dryer units, give up, and walk out while wiping their hands on their pants. So why do proprietors and building managers install these dryers if no one likes them? It comes down to space utilisation. They can avoid storing paper towels and taking care of wet paper towel waste. To be fair, electric hand dryers have improved. Several hand dryers have emerged with high-velocity air that can successfully dry hands in about 10 seconds. Finally, air dryers are useful for the first time. These dryers suggest using electricity is a benefit because it reduces paper towel consumption. But why is this a benefit and who is benefiting? The coal plant producing the electricity?

Now with hygiene and hand washing at the forefront our daily lives, we understand air dryers create conditions for cross-contamination and defeat the purpose of hand washing. The graphic below, sponsored by Sofidel and PaperNet, illustrates the contamination concerns using hand dryers



instead of paper towels. In a report published in the respected Mayo Clinic Proceedings (2012 Aug; 87(8): 791–798.), the authors state that:

*"From a hygiene viewpoint, paper towels are superior to electric air dryers. Paper towels should be recommended in locations where hygiene is paramount, such as hospitals and clinics. Many studies have found friction to be a key component in hand drying for removing contamination. Bacteria were removed from washed hands by the mechanical abrasive action of drying with paper towels. And microbiological testing of the paper towels after use indicated that many bacteria were transferred from the hands to the paper towels."*

### How will post-pandemic towel production respond?

Figure 1 shows the global commercial hand towel production capacity for the top four producing countries. Going into the first quarter of 2020, we see the United States produces 57% of all commercial hand towels. This provides the opportunity to use the US as a test case for modelling potential demand changes after the pandemic passes.

The American hand towel market covers a wide range of quality. Slightly less than a quarter of all towels are still the plain unbleached, brown, wet-creped sheets that have long been the low-price product. Figure 2 shows the bleached and unbleached fibre breakdown, and Figure 3 shows that about 85% of the total volume is made from recovered paper.

Figure 4 shows almost 25% of hand towels used in the United States are produced with TAD or some other form of advanced tissue technology to create improved softness and absorbency. This is a trend that grown as building owners/managers try to offer upgraded service for important clients. This included most truck stop chains across the US Interstate Highway System. American hand towel capacity grew at a CAGR (compound annual growth rate) of 6.5% from 2007-2019. The capacity additions shown in Figure 5 include grade changes, rebuilds, and new machines over that period.

A small consumer behaviour change in response to the pandemic could be a step change in demand of 10%, requiring two new large tissue machines. If people were to make significant changes in utilisation of facilities and towelling, a 30% increase in demand (requiring nearly six new tissue machines) is realistic.

The impact on the tissue business would be large, but American tissue producers have been quiet on the issue in the past, unlike European producers. Maybe this time is different. Tissue makers should be proud of the role they play in public health and willing to promote the products.

### COMMERCIAL HAND TOWEL PRODUCTION

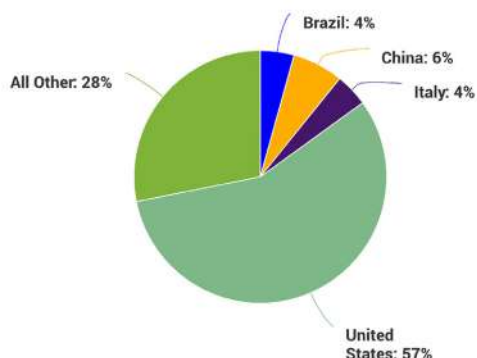


Figure 1: Commercial hand towel production by country

### COMMERCIAL HANDTOWEL BLEACHED VS. UNBLEACHED

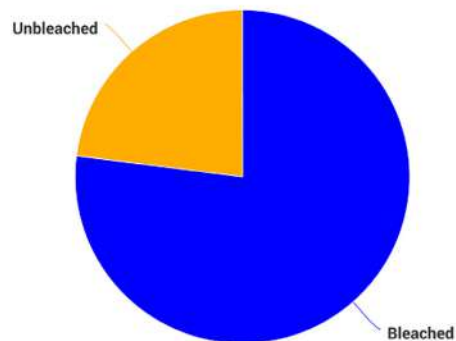


Figure 2: Bleach vs Unbleached Fibre

### COMMERCIAL HANDTOWEL FURNISH FIBER TYPE

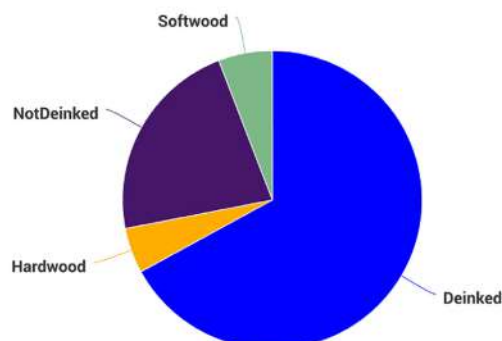


Figure 3: Commercial Hand Towel Fibre Type

### COMMERCIAL HANDTOWEL TISSUE TECHNOLOGY

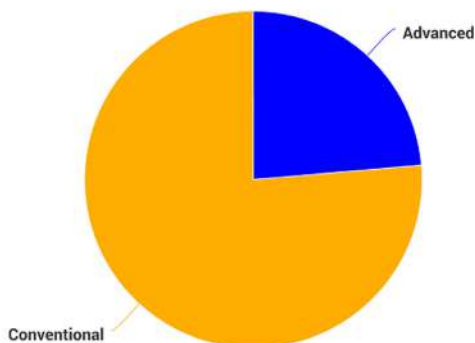


Figure 4: Advanced Technology Application to Hand Towels

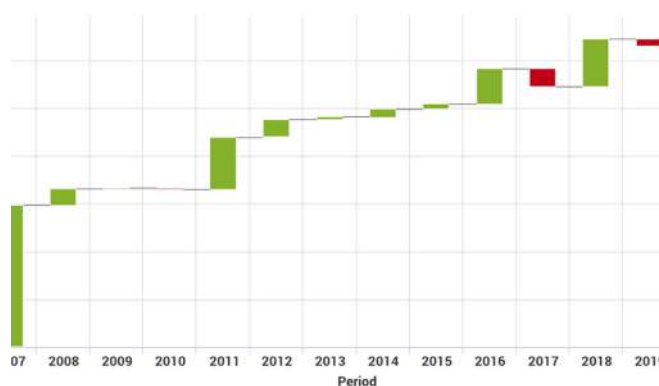


Figure 5: American Commercial Towel Capacity Growth





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**Start-up cheers:** The team at the Picknik Marketing Pty launch of the Toscotec-supplied MODULO-PLUS tissue machine at its Johannesburg mill

## SOUTH AFRICA

### Picknik Marketing Pty boosts high-quality tissue capacity with start-up

Picknik Marketing Pty has started up a Toscotec-supplied MODULO-PLUS tissue machine at its Johannesburg mill.

The new line produced high quality tissue from day one. It has a sheet width of 2.7m, an operating speed of 1,500m/min, and a production capacity of 75tpd.

It features a second-generation TT SYD Steel Yankee Dryer and energy-efficient, gas-fired TT Hood.

The supply also includes the stock preparation and approach flow equipment and an off-line shaft puller.

The service package includes erection supervision, commissioning, start-up assistance and training.

Itzik Nikfard and Rafi Nikfard, directors of Picknik Marketing Pty, said: "This project marks a key expansion phase for our company.

"Due to the success of our SnowSoft brand, we are expanding our presence in the regional market, and are determined to continue on this trend by investing in advanced technology. Toscotec's machinery will sustain our future growth by delivering the tissue quality and production efficiency we need to succeed in South Africa."

## GLOBAL

### Clearwater Paper appoints Arsen S. Kitch as CEO

Clearwater Paper has appointed Arsen S. Kitch - the company's senior vice president and general manager of its consumer products division - as chief executive as of 1 April. He succeeds Linda K. Massman, who has retired from Clearwater Paper after serving in the chief executive position since January 2013. The company has also announced that Alexander Toeldte has transitioned from chair to independent executive chair of the board, effective 1 March. Kitch has served as senior vice president and general manager of Clearwater Paper's consumer products business since 2018.

Prior to that, he served as vice president of finance and vice president of financial planning and analysis since joining the company in 2013.

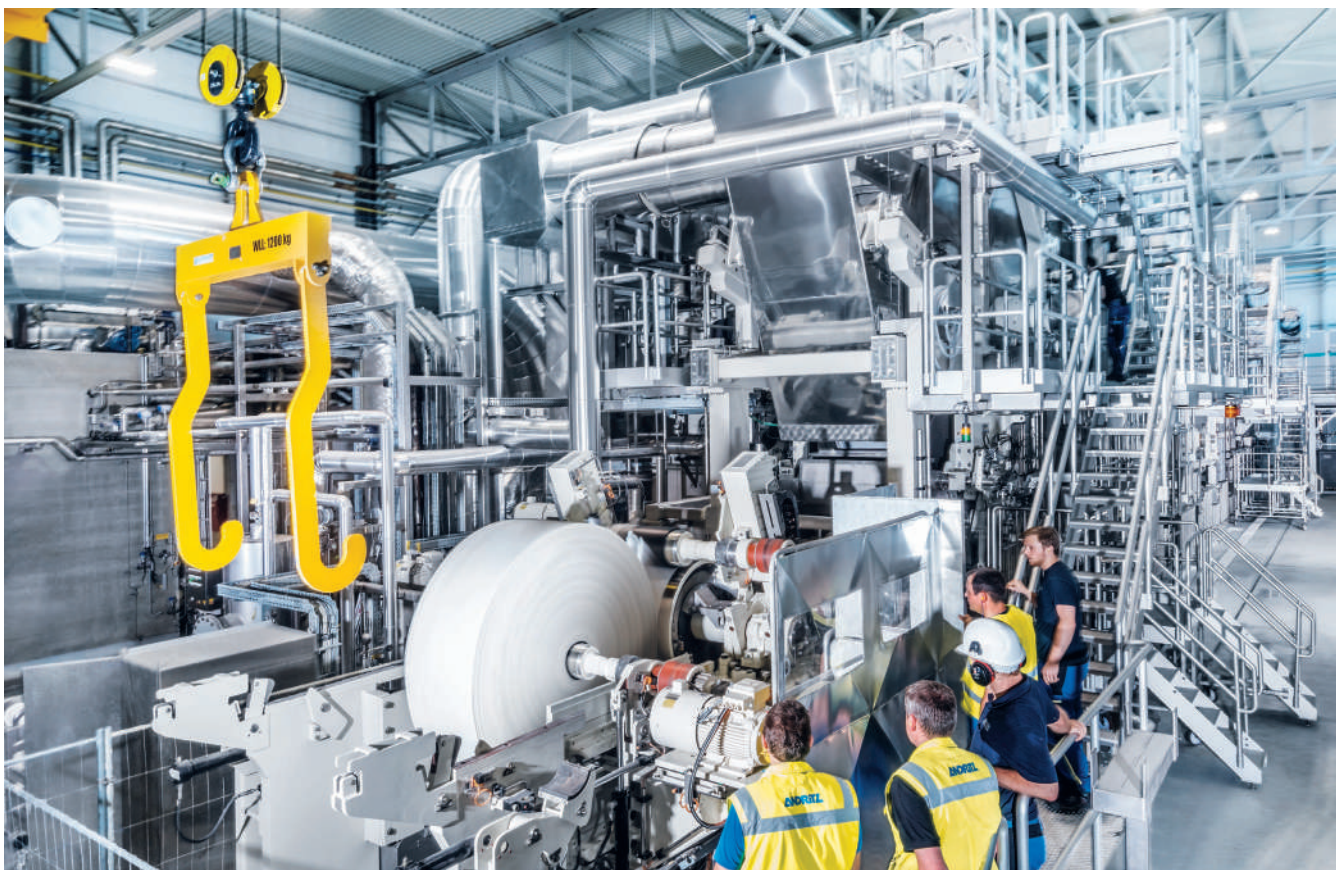


**Arsen S. Kitch:** Clearwater Paper's new senior vice president and general manager

He said: "Today, Clearwater Paper has a healthy business and a strong team focused on driving results and building on our recent momentum of solid operational results."

**CLEARWATER PAPER HAS APPOINTED ARSEN S. KITCH - THE COMPANY'S SENIOR VICE PRESIDENT AND GENERAL MANAGER OF ITS CONSUMER PRODUCTS DIVISION - AS CHIEF EXECUTIVE AS OF 1 APRIL. HE SUCCEEDS LINDA K. MASSMAN, WHO HAS RETIRED FROM CLEARWATER PAPER.**





**Advance in dry crepe tissue:** Andritz's new tissue machines PrimeLineVRT with its Vertical Crescent Former enhancing dewatering of the fibre web

## Andritz launches PrimeLineVRT – Vertical CrescentFormer

Andritz has officially launched its latest tissue machine, the PrimeLineVRT – Vertical Crescent Former – for the production of dry crepe tissue. It features a vertical Crescent Former in the forming section that the machinery supplier said enhances dewatering of the fibre web. This enables higher dryness right after the press section and an increase in paper caliper.

Depending on the grade and basis weight of the paper produced, Andritz said that between two and four additional percentage points of dryness can be achieved after the press section compared to standard CrescentFormer configurations.

Stefano Marenco, director of PrimeLineTIAC and R&D Tissue at Andritz, said: "The advantage of this new technology is that we do not need additional fabrics and fabric loops or any extra space in the basement for installation of the equipment.

"This results in lower building costs as well as easier operation and maintenance compared to similar technologies on the market."

## Clearwater Paper reports "strong sales quarter for tissue" in results

Clearwater Paper Corporation has reported net sales of \$436m for the fourth

quarter of 2019, up from \$429m reported at the same period in 2018.

Net income for the fourth quarter was \$2m compared to a net loss a year earlier of \$188m. For the year ended 2019, net sales were \$1.8bn, up from \$1.7bn reported for the year ended 2018. A net loss for the year of \$6m compared to a net loss of \$144m in 2018.

The company said it had "a strong finish to 2019 due to lower input pulp and fibre costs in the fourth quarter, and lower maintenance costs and expense timing.

"We also had a strong sales quarter for tissue, which grew sequentially for the fifth consecutive quarter.

"In addition, our new Shelby, North Carolina facility is producing to quality specifications for both ultra and premium tissue.

"Throughout the year, we intend to focus on continuing to improve our operational

capabilities to ensure we are well-positioned to generate cash flow to de-lever our balance sheet."

For the company's consumer products sector, net sales for the fourth quarter were \$231m, up 8% compared to fourth quarter 2018 net sales of \$213m.

This increase was due to higher retail tissue volumes sold offset by slightly lower prices due to mix. Total tissue volumes sold were 88,141 tonnes in the fourth quarter of 2019, an increase of 7,161 tonnes or 9% compared to 80,980 tonnes in the fourth quarter of 2018.

Average tissue net selling prices decreased 1.3% to \$2,593 per tonne in the fourth quarter of 2019, compared to \$2,627 per tonne in the fourth quarter of 2018.

Net sales in the pulp and paperboard segment were \$205m for the fourth quarter of 2019, down 5% compared to fourth quarter 2018 net sales of \$216m.

**CLEARWATER PAPER CORPORATION HAS REPORTED NET SALES OF \$436M FOR THE FOURTH QUARTER OF 2019, UP FROM \$429M REPORTED AT THE SAME PERIOD IN 2018. NET INCOME FOR THE FOURTH QUARTER WAS \$2M COMPARED TO A NET LOSS A YEAR EARLIER OF \$188M. FOR THE YEAR ENDED 2019, NET SALES WERE \$1.8BN, UP FROM \$1.7BN.**



A professional headshot of Mario Plourde, a middle-aged man with short, graying hair, smiling at the camera. He is wearing a dark navy blue suit jacket over a white dress shirt and a patterned tie with blue, brown, and white paisley designs. A small, gold-colored lapel pin is visible on his left breast pocket. The background is a plain, light gray.

**Second consecutive year of record performance:**  
*Cascades' president and chief executive Mario Plourde*

### **Cascades reports "historic results" which affirm solid growth progress**

Cascades has reported solid results for the fourth quarter and full year 2019.

Sales for the fourth quarter were C\$1,227m, up 3% compared to C\$1,196m reported in Q4 2018. Specifically, tissue sales increased by \$57m, or 17%, which the company said was a reflection of increased volumes, higher average selling price, more favourable sales mix, and the addition of Orchids Paper assets.

For the year, sales of C\$4,996m increased by 7% compared to C\$4,649m in 2018.

The company also completed the acquisition of Orchids Paper Products and announced the planned March 2020 closure of two US-based tissue converting facilities.

Mario Plourde, president and chief executive, said: "This is the second

consecutive year of record performance for Cascades.

"These historic results affirm the solid progress we are making with our growth, optimisation and strategic initiatives."

On a sequential basis, he added that the fourth quarter results "reflect the softer seasonal demand" common to the end of the year, and less favourable pricing and sales mix in all business segments.

"These effects were partially mitigated by lower raw material prices for all of our segments, acquisitions completed throughout the year, and sequentially lower production costs in tissue and European boxboard.

"Year-over-year quarterly performance was similarly aided by lower raw material

pricing and recent business acquisitions, in addition to lower energy costs.

"The resulting benefits outweighed less favourable sales pricing and mix in all segments with the exception of tissue, and higher production costs in our North American operations in part due to the higher proportion of sales coming from converting activities."

He added that the company continues to integrate Orchids' activities during the quarter, and subsequently completed the conversion of the Barnwell paper machine from QRT to conventional paper in mid-January 2020."

"We are forecasting strong year-over-year improvement in the tissue segment," he said.





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## BTG launches its first Industry 4.0 solution

BTG has launched SMART Monitoring, its first Industry 4.0 solution which the company said allows real-time performance information on all BTG assets in a pulp and paper mill.

The company said it increases productivity as the better data insights allow for traditional time and distance barriers to be removed.

BTG said: "Eventually, tangible benefits are experienced with significant yearly savings."

SMART Monitoring is based in bCONNECTTM, the company's gateway to the benefits of industry 4.0.

Built around the Microsoft Azure platform, bCONNECTTM connects BTG process instrumentation into a cloud infrastructure through specially developed edge hardware.

BTG Group is a multinational provider of integrated, highly specialised process solutions for the global pulp and paper industry.

## Russ Torres appointed as president of K-C Professional

Kimberly-Clark (K-C) has appointed Russ Torres as president of its Professional division.

Effective 9 March, Torres will lead the company's business-to-business operations globally.

He will report to Mike Hsu, chairman and chief executive of Kimberly-Clark.

Torres joins Kimberly-Clark with more than 20 years of experience within the consumer products goods industry, spanning a number of key senior leadership roles at Bain & Company, Mondelez International/Kraft Foods.

Most recently he was group president of Newell Brands, leading five divisions, 11 brands and nearly \$6bn in revenue in over 40 countries.

Hsu said: "Russ is a respected leader with a proven track record. I am confident that his extensive experience, coupled with his great passion to win, will drive top- and bottom-line growth for our Kimberly-Clark Professional business."

## Futura confirms first Together orders

Futura has received the first two orders for its newly launched Together converting and packaging lines.

The clients remain confidential and start-up is due at the end of 2020.

The Together technology is born out of Futura's technical partnership with Plusline,

**KIMBERLY-CLARK (K-C) HAS APPOINTED RUSS TORRES AS PRESIDENT OF ITS PROFESSIONAL DIVISION. EFFECTIVE 9 MARCH, TORRES WILL LEAD THE COMPANY'S BUSINESS-TO-BUSINESS OPERATIONS GLOBALLY. HE WILL REPORT TO MIKE HSU, CHAIRMAN AND CHIEF EXECUTIVE OF KIMBERLY-CLARK. TORRES JOINS KIMBERLY-CLARK WITH MORE THAN 20 YEARS OF EXPERIENCE WITHIN THE CONSUMER PRODUCTS GOODS INDUSTRY, SPANNING A NUMBER OF KEY SENIOR LEADERSHIP ROLES.**

announced in October 2019.

It aimed to introduce radical innovations - the first of which is Together - which the converting machinery supplier said is "a game-changing solution" to convert logs into shelf-ready packs.

Piero Ceccon, chief executive of Futura, said: "The market is always curious but naturally also cautious about innovations which represent a major departure from standard solutions.

"The fact that the validity of Together has been confirmed so soon after its launch is a welcome affirmation of this cutting-edge technology."

The integrated system can be installed downstream of any existing or new converting rewinder line, which the supplier said opens up opportunities for setting up new plants and for making existing lines more efficient.



"A game-changing solution": Futura chief executive Piero Ceccon

## FHH plans sixth tissue mill site following double-digits growth

Fine Hygienic Holding (FHH) has begun evaluating locations for the establishment of a sixth paper mill.

The group said the move is a result of its continuing rapid business growth.

Chief executive James Michael Lafferty said: "We are completely sold out of papermaking capacity and our branded business is growing in strong double-digits.

"We must keep an eye towards the future, and given lead-times for paper mills to be fully commissioned, to be prudent we must begin now."

Fine currently has five paper mills located throughout the MENA region, operating at full capacity with a total capacity of 170,000tpy.

The group is undertaking site evaluations at four main production sites in Jordan, Egypt, KSA and the UAE.

Lafferty added the company is preparing to seek proposals from several proven suppliers to begin the feasibility study and cost estimates.

Fine Hygienic Holding provides high-quality hygienic paper products to its customers in 75 countries around the world.

**"WE ARE COMPLETELY SOLD OUT OF PAPERMAKING CAPACITY AND OUR BRANDED BUSINESS IS GROWING IN STRONG DOUBLE-DIGITS. "WE MUST KEEP AN EYE TOWARDS THE FUTURE, AND GIVEN LEAD-TIMES FOR PAPER MILLS TO BE FULLY COMMISSIONED, TO BE PRUDENT WE MUST BEGIN NOW."**



*"We must keep an eye towards the future": FHH chief executive James Michael Lafferty*



*Position remains strong: Resolute president and chief executive Yves Laflamme*

## Resolute: 4Q results reflect "bottom-of-the-cycle conditions" in market pulp

Resolute Forest Products has said its financial position "will remain strong" following the acquisition of three sawmills, as it reports preliminary fourth quarter and 2019 results hit by ongoing pricing pressures.

The company recorded a net loss of \$71m for the quarter ended 31 December 2019, compared to a net income of \$36m in the same period in 2018.

Sales for the quarter were \$668m, a decrease of \$264m from the year-ago period.

The fourth quarter of 2018 included sales from the Catawba (South Carolina) and Fairmont (West Virginia) facilities.

For the year, the company reported a GAAP net loss of \$47m, compared to net income of \$235m in 2018. Sales were \$2.9bn, down 22% from the previous year.

On 1 February 2020, Resolute announced it had completed the previously disclosed acquisition of three sawmills in the United States for \$176m.

Yves Laflamme, president and chief executive, said: "Our fourth quarter results reflect bottom-of-the-cycle conditions in market pulp, ongoing pricing pressures in paper grades and the slow pricing recovery in lumber.

"The acquisition of three sawmills in the US South is an important step in our transformation strategy; it will give us immediate scale in an attractive region, with quality assets in a rich fibre basket,





**nature is a perfect  
technology**  
**our technology  
is perfect for nature**

Our commitment is to provide **innovative technological solutions**  
to produce **sustainable tissue products**.



close to growing end-markets.

"Our financial position will remain strong after this acquisition, and will support us as we continue to progress with our transformation strategy.

"We're pleased with the quarterly improvement in tissue EBITDA and the progress around sales growth and productivity gains"

The company's market pulp segment recorded an operating loss of \$18m in the fourth quarter, compared to \$12m in the third quarter. The wider loss reflects a 4% reduction in average transaction price.

In 2019, the market pulp segment reported operating income of \$39m compared to \$172m in 2018.

The company said the change reflects "mostly the significant drop in pricing during 2019", down on average by \$72 per metric tonne to \$690.

In tissue, the segment incurred an operating loss of \$1m in the quarter, an improvement of \$2m compared to the third quarter. Most of the improvement that led to EBITDA of \$4m in the segment largely reflects lower internal pulp costs.

For the year, the tissue segment incurred an operating loss of \$16m, compared to \$30m in 2018. The average transaction price increased by \$160 per short tonne as a result of better products and customer mix, and price increases.

Laflamme added: "With our existing tissue footprint, we expect progressive earnings growth for 2020 in the business as we continue to build on recent improvements around sales growth and productivity gains. We're excited with the prospects around the pending acquisition of three US sawmills, as our timing allowed us to achieve an attractive price."

## ITALY

### Cartiere Carrara boosts premium tissue offering with M&A

Cartiere Carrara has completed the acquisition of converting companies Carind and CRC from the Caldaroni Group.

Consistent with the company's M&A-based growth strategy, the move will significantly strengthen its premium tissue products range for the AfH and the At-Home/consumer segments in Italy.

Carind and CRC own-brands include Carind Tissue, Dayly, Value, Selly, Voilet, MAXI, CAROUSEL, X-Elegance, BLISS.

Mario Carrara, Cartiere Carrara chief growth officer, said: "We are pleased to have

finalised the acquisition of Carind and CRC.

"The integration of these players in the new Group Cartiere Carrara is allowing us to further enhance our existing position on the AfH market which is critical for a long-term growth plan.

"This operation is part of our M&A strategy, focusing on outstanding manufacturing companies that can be easily integrated in our production and marketing structure and giving a higher profile to quality and sustainability."

### Lucart increases capacity with rebuilds

Lucart has completed two dry section rebuilds at its Lucart Diecimo tissue mill.

Supplied by Toscotec, the project took place between July 2019 to February 2020.

The two rebuilding solutions included the replacement of PM5 and PM6's existing Yankees with Toscotec's second-generation Steel Yankee Dryers, complete steam and condensate systems, as well as the installation of a TT SuctionPressRoll.

Over the last ten years, Toscotec has supplied Lucart Group with one complete tissue line, two slitter rewinders TT WIND, and various tailor-made rebuilding solutions on six different tissue machines in Italy and France.

Toscotec said: "The extraordinary energy saving advantages that TT SYD delivers, on a potentially infinite number of cycles over the course of its life, save a significant amount of energy and operating costs."

Franco Pasquini, Lucart's chief technology officer, said: "We are very satisfied with the achieved performances, as well as the time

schedule and project management of these rebuilds."

Founded by the Pasquini family in 1953, Lucart is a leading producer of toilet tissue, kitchen towel, napkins, tablecloths and handkerchiefs, as well as airlaid products and MG paper.

It has three business units – business to business, AfH and consumer, producing 395,000tpy of paper on 12 machines.

## AMERICA

### Tissue World Miami reschedules for November 2020

Informa Markets has announced that Tissue World Miami will now be held at the Miami Beach Convention Center on 11–13 November 2020. We would like to thank all of our exhibitors, visitors and partners for their continued patience, resilience and understanding. The outbreak of Covid-19 has led to business across the world being progressively affected by prioritised health concerns and restrictions: the decision to postpone Tissue World Miami was due to the health and wellbeing of our tradeshow delegates and attendees, which must be our highest priority.

Since the international situation on Covid-19 started in late January, Informa Markets has had to reschedule a number of our events across our wider group. The Tissue World team is dedicated to serving and supporting the tissue community and will continue to monitor all health considerations for our industry.



**Capacity boost:** Work on replacing existing Yankees with Toscotec's second-generation Steel Yankee Dryers at Lucart's Diecimo tissue mill

## Kimberly-Clark to permanently close Fullerton plant

Kimberly-Clark (K-C) has confirmed it will permanently close its Fullerton, CA, tissue plant in the first half of 2020. The move is part of previously announced restructuring plans that will see the company closing around 10 sites and cutting 12 - 13% of its global workforce in a bid to improve costs.

The Fullerton plant was opened in 1956 and employed 330 people. Company spokesperson Terry Balluck said: "We announced the closure of the Fullerton facility in January of 2018, as part of our global restructuring programme.

"These business decisions are not taken lightly, and our priority continues to be on our employees and supporting them through this transition."

Headquartered in Irving, Texas, Kimberly-Clark makes tissue products including Kleenex, Kotex, Cottonelle and Huggies.

## FRANCE

### Papeterie Le Bourray announces PM4 rebuild

Papeterie Le Bourray has announced plans to rebuild PM4 at its Saint-Mars-la-Brière tissue mill. Supplied by Toscotec, start-up is scheduled for mid-2020. The rebuild scope includes the modification of the existing Approach Flow System with a new fan pump and a fully hydraulic TT Headbox designed to operate in Tisco Former configuration. It is capable of being upgraded into Crescent Former configuration in the future.

Toscotec will provide full beginning to end support, including detailed engineering, dismantling of the existing components, installation of new components, commissioning, start-up supervision, and training. The estimated overall shutdown

time will be less than a week. The target of the rebuild is to improve sheet formation quality and CD basis weight profile as well as increasing the machine speed.

The tissue line produces towel tissue using chemical pulp and waste paper.

Francois Bourdin, chief executive of Papeterie Le Bourray, said: "This headbox is our first major project since we restarted the mill in April 2019, and it will allow us to improve our quality and seek new markets."

## TUNISIA

### Azur Papier boosts capacity with second TM

Azur Papier has increased its tissue production capacity after starting up its second Recard-supplied tissue line.

In a DT90m project, the tissue manufacturer's general manager Lotfi Trabelsi confirmed to TWM that the line officially started up in the first quarter of 2020. The scope of supply comprises two virgin fibre stock preparation lines, a feeding unit and two rewinders as well as ancillary equipment. It has an annual capacity of around 33,000 tonnes – adding to the company's existing 21,000tpy - and a working speed of 1.8m, with a sheet width of 2.75m. It can use the Kadant deinking system for recovered pulp, which is fitted on the first machine which started up in 2013. The number of new jobs expected will be 60 of an overall 290 staff. The company is located 60kms from Tunis city.

## SWEDEN

### Andritz starts-up "world's first fossil-free biomethanol plant" at Södra

Andritz has recently started up the world's first biomethanol plant using its self-developed A-Recovery+ concept

at the Södra Cell Mönsterås pulp mill in southeastern Sweden. The plant has an annual production capacity of 6.3m litres of biomethanol from forest biomass.

The fossil-free biomethanol can be used for applications in the pulp mill itself, or as a substitute for fossil-based methanol in the transport sector (biodiesel) and as a chemical base substance. Scope of supply included proprietary process design and full EPC delivery, excluding automation, instrumentation, electrification and civil works. Andritz said the A-Recovery+ concept delivers commercial grade biomethanol by using a patented extraction process.

It offers next-generation solutions for the chemical recovery cycle of pulp mills, with the target of utilising the pulp mill side streams to the maximum extent possible.

In addition to biomethanol production, A-Recovery+ also produces sulfuric acid from odorous gases and recovers lignin for the production of high-quality lignin to be used in advanced bioproducts. The project supports Södra's ambitions to make its operations entirely fossil-free and be climate-positive by the end of this decade.

## CHINA

### APP Group boosts capacity

APP Group has purchased three new tissue E-WIND T-200S rewinders. Supplied by A.Celli, APP Group management signed for the purchase order at the end of December. The new lines are planned for the company's Gold Hongye Paper factory in Xiaogan, Hubei province, China. Two of the three rewinders are equipped with four unwinders, while the third has three; they will all handle mother rolls with diameter of 3,000mm and paper width of 5,630mm, having basis weights varying from 10.5 to 45gsm, and with a maximum operating speed of 1,100mpm.



**Rebuild plans:** Papeterie Le Bourray's Saint-Mars-la-Brière tissue mill





World record life of 661 days and 473,810,000 nip cycles: Hayat Kimya Alabuga's site

## RUSSIA

### Hayat Kimya Alabuga claims World Record

Hayat Kimya Alabuga has said its TM4 set a world record by using Voith's QualiFlex CrownT sleeve on the ViscoNip application.

The paper mill produces virgin fibre-based toilet paper, paper napkins and kitchen towels.

In December 2017, a QualiFlex CrownT sleeve was installed at Hayat Kimya TM4

maintaining stable machine production during the entire sleeve lifetime.

According to the company, Voith's QualiFlex CrownT sleeve reached a world record life of 661 days and 473,810,000 nip cycles. The former world record sleeve on such an application was set in China, achieving 585 days.

With QualiFlex CrownT, Voith offers a high-quality press sleeve for tissue shoe press applications which targets

stable machine operating conditions and optimum efficiency. Selected polyurethane materials aim for the highest possible abrasion resistance under challenging high temperature conditions.

Compared to the conventional press sleeves, QualiFlex CrownT is especially designed for tissue applications.

Conventional press sleeves show strong reactions to harsh conditions, and often suffer from hydrolysis, higher wear and reduced void volume.

With Voith's QualiFlex CrownT, open area and void volume can be designed exactly to the customer's needs.

The special heat-resistant material formulation makes this press sleeve designed for very demanding applications

Voith QualiFlex press sleeves extend the leading position for shoe press applications in the tissue sector.

## Obituary: Charles B. Housen, A giant in the tissue industry, 1932-2020

By Morris Housen, chief executive and president of Erving Industries

Charles B. Housen, born in Holyoke, Massachusetts on April 21st, 1932, died peacefully in his home in Palm Beach Gardens, Florida, on Saturday, April 4th, 2020. He leaves his wife, Marjorie (Grodner) of 63 years, children, Deborah Housen-Couriel and her husband, Lior of Israel, Phyllis Housen of New York and Los Angeles and Morris Housen, and his partner Melissa Ellis of Boston and six grandchildren, Romy, Noam, Yair and Ely Couriel of Israel and Molly and Ethan Housen of Boston; as well as his sister Joanne Housen Rose of New York.

Charley led a wonderful and dynamic life. It was filled with joy and love for his family, joy and passion for his business and joy and satisfaction for his philanthropy. His storytelling and wisdom-sharing were world renowned, and his network of friends and acquaintances was extraordinary. He always seemed to be six degrees or fewer from anyone you'd ever meet, and people would exclaim upon hearing him mentioned by others, "Not Charley Housen from Erving!!! I know him too."

He graduated from the Loomis school in Windsor, CT. and Tufts University, where he was a member of the AEPi fraternity.

As a father, he enjoyed the pleasures of raising a wonderful and loving family, a family that skied together every winter

weekend and vacation, and spent summers at a beloved lake house on Laurel Lake in Western Mass. He loved life so much and had such fun living it, and he passed this passion on to his children and grandchildren. He was curious about all things and was proud of the individual paths that each of his children and grandchildren followed.

As a business leader who took over from his father in 1970 at Erving Paper Mills, Charley grew the family business to employ over 1,300 people. He knew almost every employee's name as well as the names of many of their spouses and children. The company growth resulted in the blanketing of the entire East Coast and some of the Mid-West with Erving's paper products. He was even responsible for creating the Wendy's restaurant chain's ubiquitous printed yellow napkin. The strong family business culture that he created continues at the paper mill to this day.

At Erving, Charley served as Chief Executive and then Chairman of the Board. He also served as chairman of the Associated Industries of Massachusetts and was extremely active in YPO (Young President's Organisation), an international business organisation for which he championed many local, national and international events. He was founder and chairman of



the Executives in Residence Programme at Brandeis University's International Business School. As a philanthropist, he was active with Brandeis University, the Boston Jewish Federation, Hadassah Hospital in Jerusalem and American Friends of the Technion, bringing wealth, wisdom and work to each of these organisations.

In 2001, Charley retired from Erving Paper Mills and moved to Florida, where he played golf eight days a week, made many new and wonderful friends, played poker, ate oysters and thrived in the warm climate. He often claimed that his favourite new Florida sport was eating out. His great disposition, caring attitude and ready smile impacted so many lives. He will be remembered by all who knew and loved him.

May his memory be for a blessing.



# Excellent cleaning of forming and press fabrics

## CleanLine Excell

- + Flexibility to replace high cost raw material
- + Higher performance of forming and press fabrics
- + Less pinholing of the sheet
- + Less cleaning chemicals
- + Greater fabric permeability retention
- + Better uniformity and subsequent moisture profile
- + Less water and energy consumption
- + Better runnability

The Voith CleanLine Excell is a very effective traversing cleaning system that gives consistent and uniform cleaning of the surface and structure of forming and press fabrics to create a wider operating window for tissue production.

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# NET TISSUE EXPORTER ON TREND TOWARDS THREE TIMES MORE THAN COUNTRY IMPORTS

PORTUGAL HAS HAD A SIGNIFICANT EFFECT ON WORLD HISTORY AS A MARITIME POWER AND EXPLORER. IT MADE A LASTING IMPACT ON CULTURE IN BRAZIL, ASIA, AND AFRICA.

Sharing a border only with Spain, Portugal shares a lot of similarities with its neighbour on the Iberian Peninsula. This includes membership in the European Union, the euro currency, and NATO. Portugal expects a decrease in population through at least 2060. The most moderate scenario shows a decline from 10.5m people in 2012 to 8.6m in 2060, due to a drop in birth rate, low immigration, and significant aging of the projected population.

Portugal's economy was also struck by the great recession and just gained traction in 2015. Figure 1 shows Portugal's population has been flat and is now declining at an estimated rate of -0.25% in 2020. The economy has continued to rebound and grew at about 2% GDP in 2019.

Although Portugal and Spain share many similarities, Figure 2 shows Portugal's unemployment has come down much further while inflation remains tame.

Portugal's major tissue import partners are shown in Figure 3. Spain makes up most of the tissue imports with Italy, Austria, France, and Germany supplying all but 1-2% of the rest. Portugal's overall import volume has decreased through the period by slightly more than one third.

Figures 4 shows Portugal's tissue exports for the same period. Again, Spain represents the overwhelming majority of trade transactions, while the United Kingdom is a

new outlet for Portuguese tissue producers.

Comparing Figures 3 and 4 shows that while Portugal has reduced its tissue imports, the tissue exports have risen even faster, making Portugal a net tissue exporting country. If this reversal were to continue, Portugal could easily export three times as much tissue as it imports. The net tissue balance shows Portugal is now exporting about 25% of its tissue production capacity.

Figure 5 shows the evolution of Portugal's tissue capacity over the same period. This resulted in a net increase of six tissue lines to Portugal's production capacity.

Portugal's tissue grade mix is shown in Figure 6. The overwhelming majority is consumer-tolerant tissue, but specialty tissue plays a larger part than many markets.

Figure 7 shows the furnace used by the various tissue products within these grades. We see the end product playing a significant role in consumer facial, consumer tall, and crêpe wadding. The majority of consumer bath tissue is hardwood pulp. In this case, the hardwood pulp is integrated eucalyptus fibre.

Figure 8 shows the overall high level of tissue fibre integration in Portugal's production. This integration includes both eucalyptus and deviant fibre.

Figure 9 shows about 10% of Portugal's tissue production uses advanced



**Bruce Janda**  
Senior consultant, Fisher International

technology. Figure 10 shows that this application is concentrated on consumer bath tissue, presumably to improve softness and strength.

Portugal's overall fibre sources for tissue are shown in Figure 11. Kraft bleached eucalyptus hardwood pulp makes up over 50% of the total fibre used in tissue making. The second most significant contribution comes from recycled paper.

The relative average tissue machine quality of Portugal is compared to its frequent trading partners in Figure 12. This shows the average tissue machine technical age on the X-axis compared to the trim width on the Y-axis.

Newer and wider machines are considered to have the advantage. The size of the bubble represents the overall capacity of each countries tissue business.

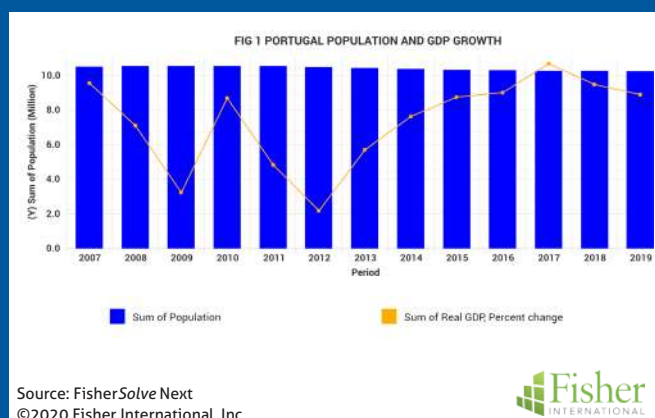


Figure 1

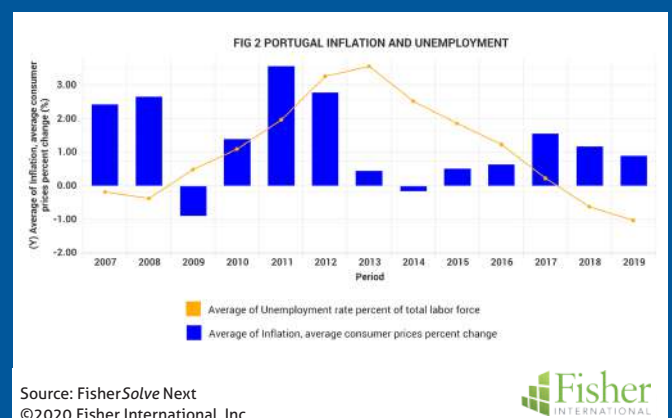


Figure 2

Portugal has the latest tissue machine fleet on average but tends to be narrow width.

Portugal's relative application of advanced tissue technology is compared to the other trading partners in Figure 13. Portugal's comparable fractional use of this technology probably matches the others, but the overall capacity of advanced technology tissue produced is low.

The country is advantaged by relatively high degree of tissue fibre integration. Figure 14 shows this advantage in a cost comparison to the selected trading partners. This analysis shows it is, on average, the lowest cost tissue producer of the group. Austria, Spain, and Italy are the nearest cost competitors.

Carbon emissions is the newest frontier in comparing tissue production efficiency.

Figure 15 shows the cradle to gate average carbon emission per ton for each of the countries in the comparison group.

France has a significant advantage from its carbon-free nuclear-powered electricity grid. Spain, Portugal, Austria, and Italy are very similar to each other. The United Kingdom and Germany are disadvantaged due to high emissions from fossil fuel consumption in the tissue mills (UK) or electricity grid (Germany). This can be expected to add to the cost of tissue production shown in Figure 14.

Portugal has enjoyed a better recovery from the great recession than most of its trade partners. The long-term forecast for population decrease will be a significant challenge. The modern tissue assets and low costs due to fibre integration should

continue to support the transition from a tissue importer to a tissue exporter.

Will it continue to invest in new production assets to support export growth or will imports from its larger European neighbours push back?

This article presents a static picture summary of Portugal's tissue industry today. Fibre prices, exchange rates, and environmental regulations will change, giving some participants advantages and others new challenges. Tissue companies' mills will continue to change hands and perhaps consolidate; neighbouring countries may further invest in tissue-making capacity, thus affecting Spain's and Portugal's imports and exports.



Figure 3



Figure 4

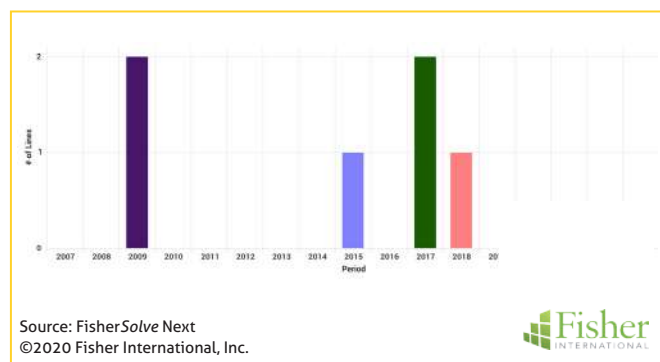


Figure 5

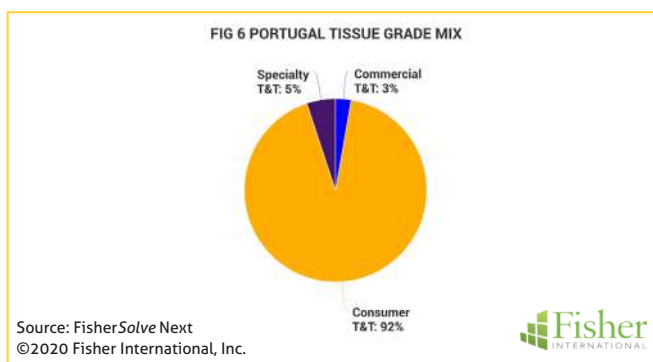


Figure 6

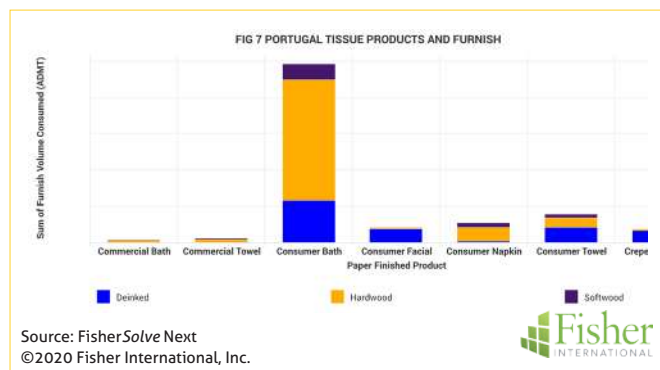


Figure 7

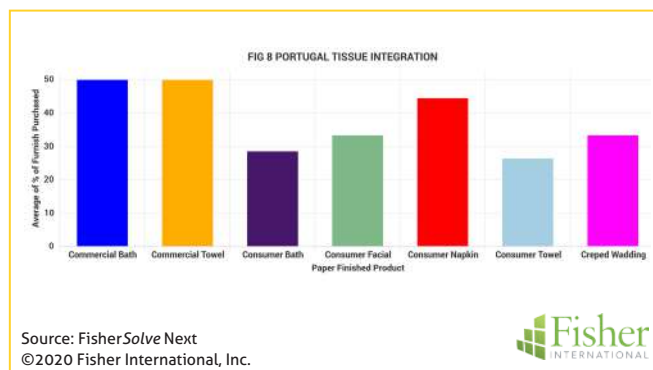
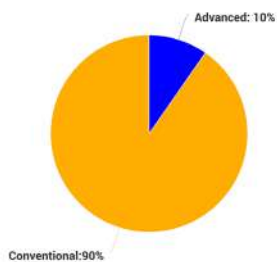


Figure 8

FIG 9 PORTUGAL TISSUE TECHNOLOGY

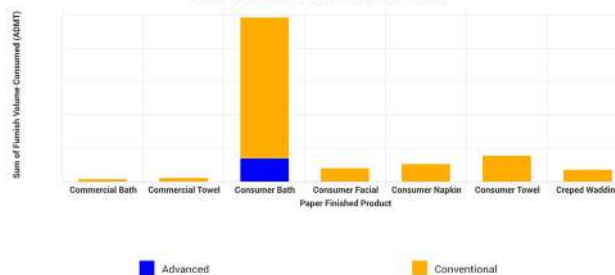


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Figure 9

FIG 10 PORTUGAL TISSUE TECHNOLOGY BY PRODUCT

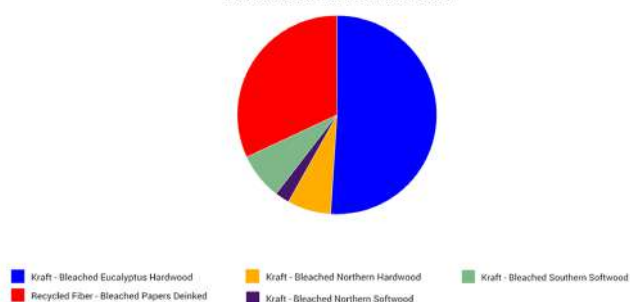


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Figure 10

FIG 11 PORTUGAL TISSUE FIBER SOURCES

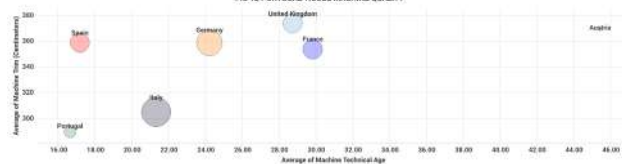


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Figure 11

FIG 12 PORTUGAL TISSUE MACHINE QUALITY

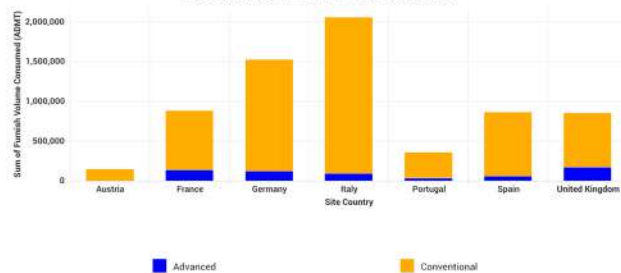


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Figure 12

FIG 13 PORTUGAL TISSUE TECHNOLOGY COMPARISON

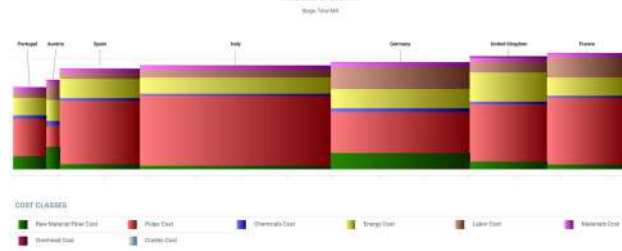


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Figure 13

TOTAL COST BY COUNTRY

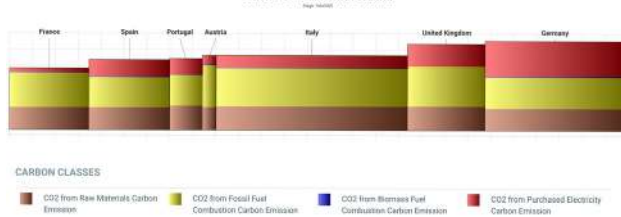


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Figure 14

USER SELECTED EMISSION BY COUNTRY



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Figure 15

## About Fisher International, Inc.

Fisher International, by virtue of its deep expertise in the pulp and paper industry, provides insights, intelligence, benchmarking, and modeling across myriad scenarios. By arming companies with the knowledge that will help them gain a better understanding of their strengths and help identify weaknesses, Fisher is helping businesses stave off challenges and better position themselves for long-term growth. For more information, visit [www.fisheri.com](http://www.fisheri.com), email [info@fisheri.com](mailto:info@fisheri.com) or call +1 203.854.5390 (USA)



# CONSUMER TISSUE IN PORTUGAL: 2020 DISRUPTION VS LONG-TERM OPPORTUNITIES

**AT** 7kg per capita in retail consumer tissue, Portugal falls somewhat behind its European counterparts, with room to grow especially in categories like toilet paper and facial tissue. It is worth noting, though, that Portugal is among European countries with a high penetration of bidets, which limit the demand for toilet paper.

Companies like Banita continue to promote and sell bidet in the country, also emphasising bidets as an eco-friendly solution that is said to reduce the use of toilet paper by as much as 75%.

Untapped consumer and product innovation will likely be supporting positive, albeit slow, growth in retail tissue in the country in the next five years and long term, at projected 0.6% in CAGR retail volume (measured in tonnes) over 2019-2024.

This is despite expected weak birth rates and negative growth in population in Portugal over the same period of time, indicative of some opportunities in the market in terms of household penetration.

These projections, however, do not yet fully take into consideration the impact of Covid-19 outbreak.

## Covid-19 disruption and full 2020 forecast

While the full extent of Covid-19 outbreak is yet to be defined, a number of scenarios can be considered. Similarly to other markets impacted by Covid, tissue manufacturers and suppliers in Portugal are reporting higher consumer demand for tissue products, as consumers have been stockpiling in the face of uncertainty



**Svetlana Uduslivaia**  
Euromonitor International's  
head of tissue & hygiene industry

COMPANIES LIKE BANITA CONTINUE TO PROMOTE AND SELL BIDET IN THE COUNTRY, ALSO EMPHASIAING BIDETS AS AN ECO-FRIENDLY SOLUTION THAT IS SAID TO REDUCE THE USE OF TOILET PAPER BY AS MUCH AS 75%. UNTAPPED CONSUMER AND PRODUCT INNOVATION WILL LIKELY BE SUPPORTING POSITIVE, ALBEIT SLOW, GROWTH IN RETAIL TISSUE IN THE COUNTRY IN THE NEXT FIVE YEARS AND LONG TERM, AT PROJECTED 0.6% IN CAGR RETAIL VOLUME (MEASURED IN TONNES) OVER 2019-2024.

## Retail tissue sales, kg per capita, Western Europe, 2019

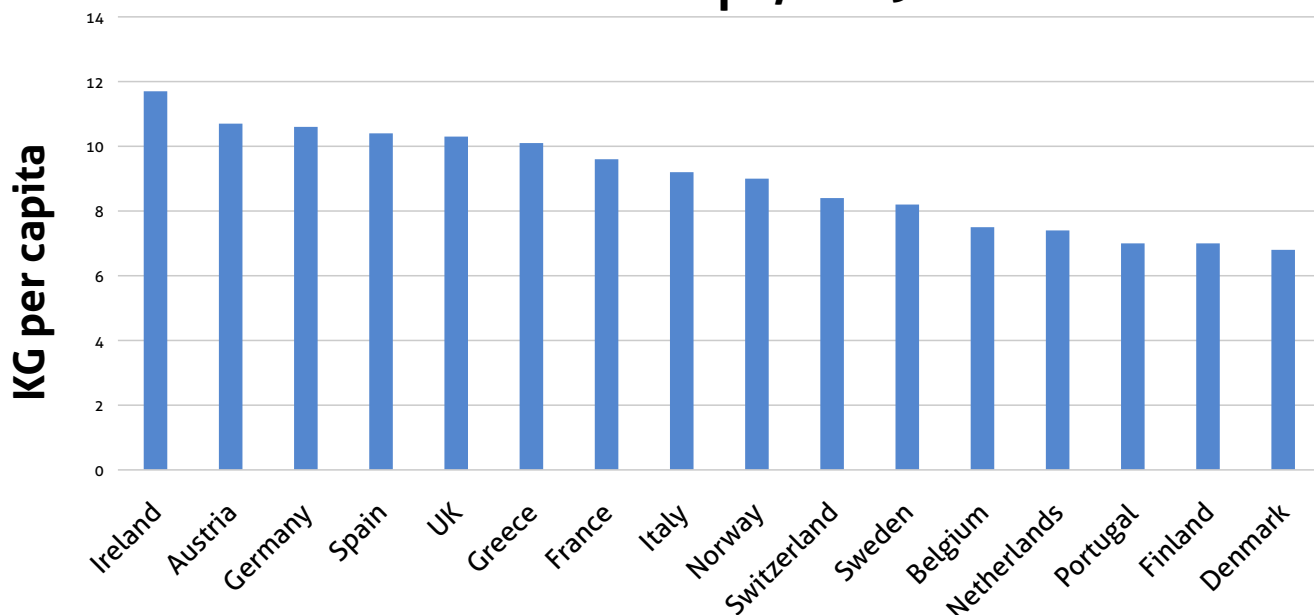


Table 1: Retail tissues sales, kg per capita, Western Europe 2019

Source: Euromonitor International

as well as slower business activities, school closures and move to work-from-home options.

Depending on the length of the stay-at-home practices and the higher need for at-home products, Portugal can see further boost to demand through the 2020, adding somewhat to the projected sales in volume and value of retail tissue. However, if ongoing Covid pandemic leads to prolonged economic downturn and further losses of jobs and incomes, consumers are likely to scale back on purchasing non-essentials like paper towels, napkins and facial tissue, turning instead to cheaper alternatives and shaving off estimated nearly 2% from the projected already modest growth in retail tissue revenues.

Current Euromonitor Industry Forecast Model indicates best case scenario at 1.2% rise in volume vs Covid-19 recession scenario at flat growth in volume, at about 0.2%, for the full calendar 2020. However, as the situation changes rapidly, the scenarios might change further, as new government measures and shifts in macro-economic scenarios take effect.

Additionally, AfH demand and sales are

expected to decline as recovery of business activity, travel and tourism will take longer to comeback to pre-Covid normal. Pe-Covid projections indicate AfH retail tissue in Portugal to gain 5% CAGR in value terms and 3% in volume. However, prolonged Covid downturn is likely to throw growth rate into a negative territory.

### Path to innovation for long-term growth – from value and convenience to eco-friendly and premium

While Covid-19 pandemic will have an impact on consumer purchasing across product categories in 2020, a number of trends have been playing out on the market that can help plan for longer term growth in consumer tissue.

Looking at various product categories, boxed facial tissues still has a low penetration in the Portuguese market, offering an opportunity for long term growth. Historically, suppliers of facial tissues have been using packaging to differentiate between products. Renova, for instance, invested in themed products within its Pop line, also featuring images associated with school and offices to draw

consumer attention.

In toilet paper and paper towels, compact coreless rolls have been gaining traction across brands and price tiers. Giant rolls have also been gaining acceptance among consumers in the country, while additional cost-efficiencies and functionality were offered by a new line of Colhogar Adapt paper towels. The new line allowed for a sheet of towel to be split in two and avoid unnecessary waste. The brand also released a new XXL paper towel roll, offering extra absorption even in wet conditions.

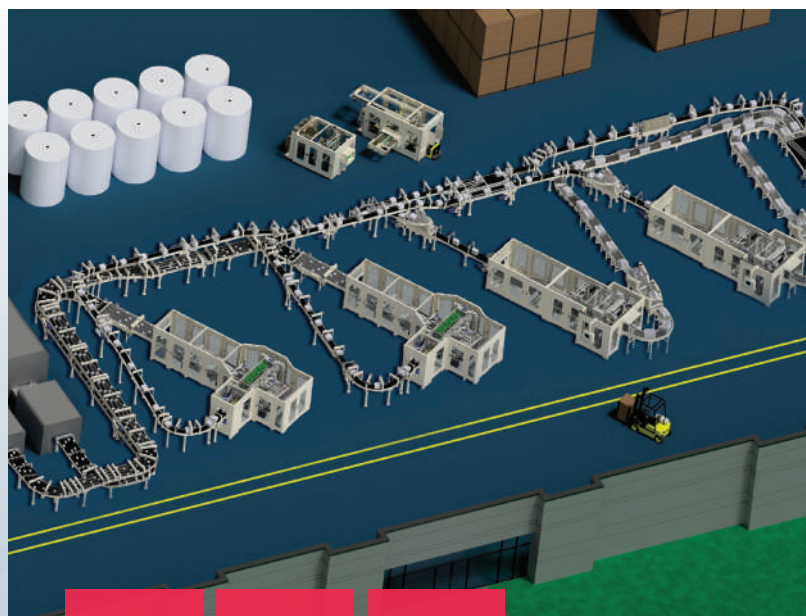
Furthermore, tendencies towards products with eco-friendly positioning have been noted in packaging innovation, like that by Renova. The company introduced paper packaging for its tissue products in 2018 to respond to the trend towards reduction in the use of plastic.

While 2020 is expected to be challenging for the industry, looking ahead there are opportunities in driving further household penetration of products like facial tissue as well as innovation alongside of cost-efficiencies, absorbency, added functionality, and environmental positioning.

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# THE GAME CHANGER IN RECENT TIMES HAS BEEN ACCESS TO TISSUE PRODUCT INFORMATION... ALLOWING THE PUBLIC TO MAKE INFORMED DECISIONS ON THE ENVIRONMENT, HEALTH AND WELLBEING.

London based Mark Hendriksen is a researcher and blogger about the world of toilets, with humorous and educational health related books to his credit. He's an entrepreneur with a successful career in tourism publishing, a problem solver, a yogi and a part time traditional sourdough baker, and the award-winning owner of The Merchant's House Boutique Hotel/B&B on Corfu, Greece. His report was written pre-lockdown.

**A**t home in London, I like to ensure that we choose products from the eco-friendly options. That applies to toilet paper and pretty much everything else. Availability is still good and new 'eco-friendly' brands are constantly emerging, while established ones are improving, all of which is helping to build and sustain the eco-momentum. With the boutique B&B we have in Greece, we have always cared for the environment and chosen the 'greenest' options available there too. Though interestingly, in most of Greece (and a number of other European countries) they don't permit you to put toilet tissue in the toilets, but in bins adjacent to the WCs. It's a much-debated topic as to why, but it seems that either the pipes are too narrow, they just like to keep the sea clean, or both.

Quality doesn't always necessarily equate to greater expense and vice versa. Companies like Cheeky Panda, Who Gives a Crap (WGAC), Ecover, smol and Method are all high quality but also offer value. It can be done, and as there's more demand for products that combine quality + care for the environment, that should result in better prices for better quality becoming more of a standard. What's really boosted that in recent times is access to product information, and subsequently purchasing, via social media – that has been and remains a game-changer.

Buying environmentally-friendly tissue products is something that I've been aware of way back. But the accessibility wasn't there, nor enough publicity or communication to help the public make informed decisions. I find environment, health and wellbeing of particular importance. I'm a big fan and advocate of companies that are 'giving back' e.g. helping third world countries, i.e. 25% of the world population who lack access to basic sanitation/water. If part of the price you pay is for good, then yes, I truly support that.

With the outbreak of Covid-19, in terms of retail and buying habits it's not directly Covid-19 that is, and has been effecting people and their shopping routines, but the fear. I research and write about the world of loos and my message from day one was: "There is no shortage, other than that created by panic buying."

Another consideration is the number of people using face tissues or kitchen roll as a toilet paper substitute, and being blissfully unaware that these don't break down like toilet paper and further clogs up sewers. I'm glad to see there's been more publicity about this in the past few weeks, but it's worth repeating until it sinks in.

The unforeseen shopping curveball has disrupted some supply chains and skewed things for a while. We're beginning to see the end of the tunnel as the 'hoarders' who bought excess toilet paper and similar shopping supplies now see that shops are being restocked, limitations have been set.

Queuing is helping as well. The main concern now is that the supply chain, transport and logistics keep working. We didn't feel the need to buy more. We believed that given time and enough social media commentary, things would right themselves – as all the experts had said all along. With some of the companies we buy from, their main (if not only) purchasing option is online like WGAC and smol. Otherwise, we'll buy from supermarkets, the likes of Wholefood Market and/or health shops. Mixing it up between online and 'high street' is the ideal retail therapy and I personally feel is a better mix for local community, staying sociable (getting out and off the cell phone, etc.), improving neighbourhoods and retaining meeting places.

From a member of the public's perception and with a degree of general knowledge, the UK is



a big-time toilet paper and tissue user. We're adapting to the environmentally-friendly products but it seems to be a market that's growing organically.

My prediction that bidets will make a comeback is beginning to come true; it's becoming a major disruptor in the toilet paper sector and Covid-19, plus the toilet paper stampede has been spotlighting this as an option, and potentially a more permanent fixture in traditionally paper-only bathrooms. Again, it's another of the potential changes along with 'bamboo' toilet paper suppliers, but perhaps these may be the tails (or tales) that start to wag the dogs i.e. the bigger toilet paper manufacturers?

The accessibility of tissue products is widespread, but what has historically been the main influence for consumer behaviour, choice and thinking and still is, is the local culture and their bathroom culture. As these worlds collide, it appears the industry is becoming more creative and aware of how this may affect them in the longer term. For example, the Covid-19 pandemic and the surge in toilet paper and tissue sales has led to consumers abandoning their usual brands in favour of whatever was available.

It will be interesting to see if, and how many, go back to their previously preferred brands.



# 'AS PANIC BUYING SOARS, ALL SUPPLIERS EMPHASISE THE RESILIENCE OF THE SUPPLY CHAIN THAT CAN ADJUST AND BE INCREASED IN RELATIVELY SHORT NOTICE.'

Pirkko Petäjä and Mikko Helin, principals at AFRY Management Consulting, weigh the short- and long-term consequences for consumer tissue growth and AfH tissue market during and after the pandemic.



**Pirkko Petäjä**  
Principal,  
AFRY Management Consulting

Globally the AfH share of total tissue market is slightly over 20% ranging from over 30% in North America to somewhat over 10% in China. In many mature markets the AfH segment shows a steady growth reflecting the, until very recently, fairly good general economic climate. However, in the large emerging markets and globally as a whole the consumer segment determines the total tissue demand growth.

Population growth is a major AfH growth factor. Developing, e-commerce and distribution networks also boost the AfH sales as well as innovative product and dispenser system offerings.

AfH is somewhat more volatile than the retail segment; in high economic cycles the high employment and increased travelling

and eating out increase the AfH demand, but during economic downturns the opposite impacts are clear as well.

Some tissue companies are specialising on AfH and it can be seen as a way to enter new markets. Competition and entry in AfH is easier than in the consumer side where the large efficient PL producers, powerful retailers and the strong branded players dominate.

## Private label grows faster almost everywhere

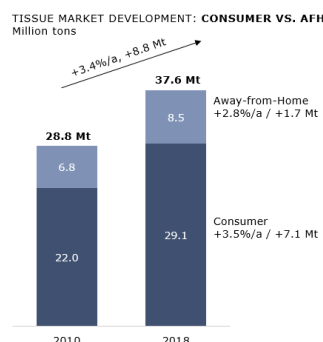
The retail tissue demand growth is strongly related to population growth and increasing number of households. Retail segment is less influenced by economic



**Mikko Helin**  
Principal,  
AFRY Management Consulting

IN THE LARGE EMERGING MARKETS AND GLOBALLY AS A WHOLE THE CONSUMER SEGMENT DETERMINES THE TOTAL TISSUE DEMAND GROWTH. POPULATION GROWTH IS A MAJOR AFH GROWTH FACTOR. DEVELOPING, E-COMMERCE AND DISTRIBUTION NETWORKS ALSO BOOST THE AFH SALES AS WELL AS INNOVATIVE PRODUCT AND DISPENSER SYSTEM OFFERINGS.

Globally the consumer segment growth determines the total tissue demand growth



volatility as a whole, but during slow economic growth more consumers may choose retailer brands (private label) over branded due to lower price.

The Millennials are more loyal to the shops and retailers where they shop than to the brands. They also have financial struggles and may therefore prefer private labels. Millennials see private labels differently to the older generations; private labels have become products that deliver innovations, better quality and value for money. Private label quality has been becoming closer to that of brands; even the latest premium technologies are increasingly applied.

Private label is therefore the fastest growing segment in most tissue markets. Its relative growth has accelerated in many regions that have been strongly branded in the past. In North America, the private label share was 22% in 2010, when it currently is some 30%. In western Europe, the average private label share in volume terms was 58% before the economic crisis, 63% in 2010, and is some 66% now.

Private label has increased throughout the mature markets, in some countries and time periods the development has been very fast.

## Retail developments

The retailer development is also a great driver shaping the tissue markets. Developed out of modern retail, the concentration and prevalence of large chains and discount stores has an increasing impact on the tissue trade.

On-line retail continues to increase, though it still remains in a relatively low share of the total retail. Online shopping is, however, increasing in double digits. The younger generations have finally learned to use it increasingly even in groceries and the supply and delivery innovations have made it more attractive.

From the younger generations an increasing share make their daily shopping on-line and typically something like tissue paper is often together with other groceries purchased during various on-line promotions and sales campaigns. On-line shopping has an impact on purchasing habits; package sizes grow bigger, type of product may be impacted etc. Private label share in on-line shopping in general is still modest, but developments in consumer packed goods, like tissue paper are faster than in many other products.

**THE MILLENNIALS ARE MORE LOYAL TO THE SHOPS AND RETAILERS WHERE THEY SHOP THAN TO THE BRANDS. THEY ALSO HAVE FINANCIAL STRUGGLES AND MAY THEREFORE PREFER PRIVATE LABELS. MILLENNIALS SEE PRIVATE LABELS DIFFERENTLY TO THE OLDER GENERATIONS; PRIVATE LABELS HAVE BECOME PRODUCTS THAT DELIVER INNOVATIONS, BETTER QUALITY AND VALUE FOR MONEY.**

## Will there be any long-term impact of the Covid-19 on tissue markets?

What is happening? During the outbreak of the Covid-19 pandemic, there is a curious phenomenon that takes place everywhere; people are stocking toilet paper. Producers report they have sold almost triple the amounts than normal.

This news has come from everywhere in the world. In addition to Europe, in North America and Australia there are videos of empty shelves and people fighting for the last toilet paper packages. Every one of us has been witnessing the at least temporary shortage in our own grocery stores. In some locations in North America there are limitations of two packs of toilet paper per client.

The market situation starts to reflect to prices, if not yet to the normal retail prices, however in e-bay type of platforms toilet paper can be sold at many times the normal price at the moment. There are also consequences when people start to use something else instead of toilet paper: in the UK sewers have been blocking due to substituting toilet paper with kitchen towel and non-flushable wet wipes.

## Why toilet paper? Why do people buy toilet paper in a crisis? The basic demand does not much increase, or does it?

The first reason is the fear of the availability weakening or stopping. Similarly people fear that they end up in

quarantine and cannot buy more, however, there are many other items facing the similar situation, why especially toilet paper?

Some say that toilet paper is a symbol of safety and preparedness. There is a comfort in knowing that it is there. In an uncertain moment there is at least something what you can do; buy toilet paper. It is something necessary and fundamental that you can control and you get a feeling of having control. In a health crisis there can also be a general fear of disgust and untidiness and toilet paper is a symbol of fighting that.

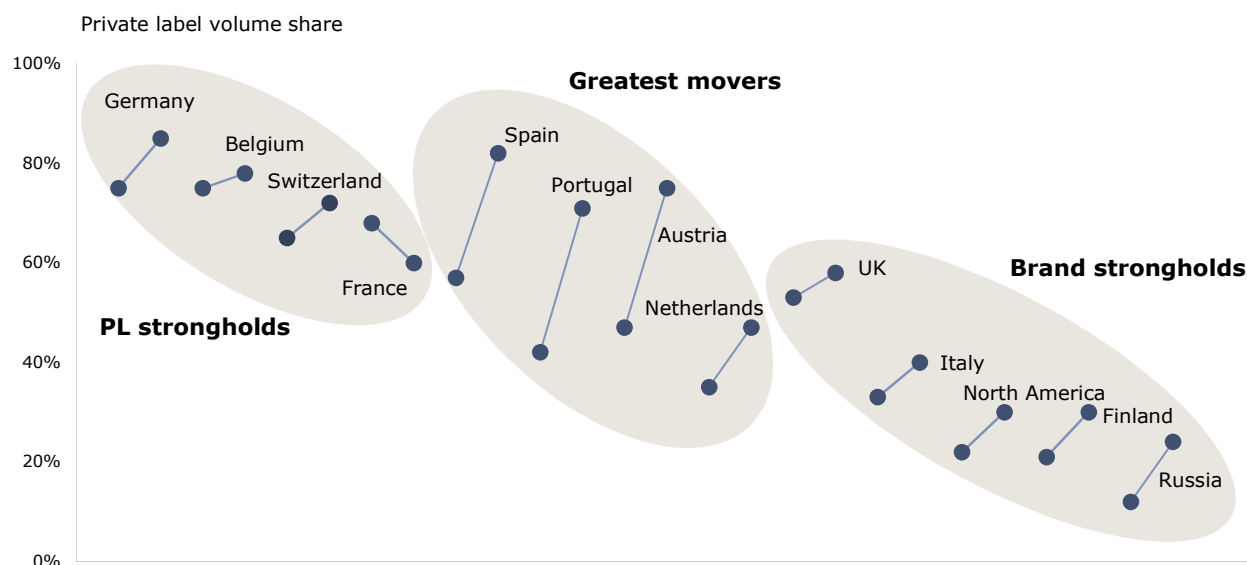
Very common is of course 'everyone else does it'. It does not cross your mind normally, but when you see that people buy it crazily, the result is that you start to think that maybe you need to stock it as well.

## What is the short term impact on the demand?

There is obviously a significant short term peak in the retail demand of consumer toilet paper. In addition to toilet paper, kitchen towels, hand towels, hankies, wet wipes, etc. Increases in the short-term due to hoarding, actual increasing need and also increased hygienic awareness. Retail demand increases also as people are increasingly at home. All suppliers emphasise the resilience of their supply chain and urge consumers not to panic-buy, there is no need for that, and actual shortage is not foreseen. Also production can adjust and be increased in relatively short notice.

**IN ADDITION TO TOILET PAPER, KITCHEN TOWELS, HAND TOWELS, HANKIES, WET WIPES, ETC. INCREASES IN THE SHORT-TERM DUE TO ACTUAL INCREASING NEED AND ALSO INCREASED HYGIENIC AWARENESS. RETAIL DEMAND INCREASES ALSO AS PEOPLE ARE INCREASINGLY AT HOME. ALL SUPPLIERS EMPHASISE THE RESILIENCE OF THEIR SUPPLY CHAIN AND URGE CONSUMERS NOT TO PANIC-BUY, THERE IS NO NEED FOR THAT, AND ACTUAL SHORTAGE IS NOT FORESEEN.**

## Increased retailer concentration results in higher private label shares. Economic downturn has normally a similar impact



Only very short-time shortages can take place. Some people may have to replace their favoured imported brands with local products, or some other hick-ups may occur.

In theory the ongoing Covid-19 pandemic should hit the whole AfH segment quite hard with decreased demand owing to people working from home, reduced travel, empty hotels, restaurants and schools. However, at least at the very short term also the AfH demand has increased due to hygienic awareness, increased consumption of hand towels, usage in health care, hoarding among consumers and distributors etc. Regional differences may occur and the negative impacts may start to show a little later.

### Will there be any long term impacts on behaviour and trading habits?

The coronavirus has rapidly accelerated the increase of the on-line grocery shopping. It can be requested from people in quarantine and become very useful for groups at risk. People can learn this new way and will continue to use e-commerce also after the crisis. It is likely that the coronavirus has an increasing impact on on-line shopping, maybe even permanently. This can consequently have an impact on package sizes, shopping trends (how much at a time), qualities favoured, branded vs. private label. These matters can change permanently.

In the long run the AfH demand can increase due to the increased hygienic awareness. Paper hand towels can be preferred compared to blow dryers after

suffering of this airborne infection, hankies can be increasingly used and they will be thrown away quicker after use. Generally speaking the increased hygienic awareness will have an increasing impact on all tissue paper, including even toilet paper demand.

### Impact of the economic crisis

Economic downturn has a known impact on tissue markets; normally the impact on demand in volume terms is not necessarily high, but there is a shift towards lower qualities and prices, private label typically increases on the cost of branded.

AfH normally suffers from an economic downturn. Depending on how badly the world is hit, there can be difficulties to reach the pre-crisis levels in e.g. travel and tourism related consumption. However, in the long term the Covid-19 pandemic may lead to increased demand of hygienic and health products due to, for example, greater focus on hand hygiene.

The industry may also suffer due to

operational and financial problems. A few temporary closures have taken place in the worst areas for precaution reasons (some mills, like Duni, Rexcell for market reasons). Luckily many mills have already been allowed to re-open, especially in China. The production breaks have an impact on the economy of the companies. Pulp prices in the long run typically do not peak during a downturn, which might be a positive factor after the shorter term supply/demand imbalances. There can, however, be severe financial difficulties for some of the companies, projects will be delayed, etc. that can impact the machinery and service suppliers and the whole branch.

The economic crisis due the Covid-19 will be unprecedented. Nobody knows how bad it will be but undoubtedly it can have a direct and indirect impact also on tissue industry. Tissue and hygiene is, however, one of the businesses where the demand is fairly resilient in economic crises, though there will be differences between regions and shifts between segments and categories.

**ECONOMIC DOWNTURN HAS A KNOWN IMPACT ON TISSUE MARKETS; NORMALLY THE IMPACT ON DEMAND IN VOLUME TERMS IS NOT NECESSARILY HIGH, BUT THERE IS A SHIFT TOWARDS LOWER QUALITIES AND PRICES, PRIVATE LABEL TYPICALLY INCREASES ON THE COST OF BRANDED. AFH NORMALLY SUFFERS FROM AN ECONOMIC DOWNTURN, BUT IN THE LONG TERM THE COVID-19 PANDEMIC MAY LEAD TO INCREASED DEMAND FOR HYGIENIC AND HEALTH PRODUCTS DUE TO, FOR EXAMPLE, GREATER FOCUS ON HAND HYGIENE.**



# LOGISTICS' LEAN BUSINESS MODEL AND 'KEY WORKER' STATUS WELL PLACED TO MAINTAIN SUPPLIES DURING THE PANDEMIC

Covid-19 has led to a surge in demand for toilet paper, and concerns that tissue production and imports could grind to a halt. Yet logistics are adaptable and resilient, and UK companies have already prepared for any potential no-deal Brexit disruption. Sarah Laouadi, European policy manager of the UK-based Freight Transport Association, explains.



**Sarah Laouadi**  
European policy manager,  
Freight Transport Association

**A**round the world consumers have panic bought huge quantities of rolls in fear of future shortages in the supermarkets. It has been unprecedented in the UK. Yet while there are some areas of potential concern for the businesses in charge of protecting the supply chain, they are more than capable of handling the challenges ahead with the right support from government.

With most of the paper pulp used to produce tissue paper imported from mainland Europe, and, at the time of publishing with some European countries under intense lockdown, there are concerns that tissue production and import activity will come grinding to a halt and UK supplies could suffer as a result.

However, according to the Confederation of Paper Industries (CPI), British manufacturers have substantial reserves of the raw materials used to make toilet rolls – enough to supply the public for months – so there is no need for concern should importation become difficult in the short-term.

Andrew Large, the group's director-general, also highlights that toilet roll supply chains were strengthened

recently by businesses undertaking Brexit preparations; many CPI members significantly increased their warehouse space to plan for border disruption in the event of a no-deal Brexit and as such, have plenty of supply.

Furthermore, the raw materials needed to produce toilet paper are readily available across the globe, and as long as toilet paper manufacturers remain adaptable, alternative material sourcing is possible.

In a recent interview with *i news*, the managing director of Manchester-based toilet roll manufacturer Nova Tissue, Khurram Iqbal, explained he can source the raw materials needed to produce toilet paper from a number of countries on mainland Europe, and should those countries face lockdown, he can get his supplies from countries further afield, such as Turkey and Malaysia.

On the domestic front, the UK logistics sector can deliver all the toilet roll, food and other basic items required to meet the needs of the public during the Covid-19 outbreak, providing that people do not panic buy. Logistics businesses operate under a very lean business model, with deliveries made "just in time" to keep prices as low as possible, but empty shelves do not mean that stock is not on its way.

HGV drivers, warehouse staff, van drivers and other logistics workers continue to work under extreme pressure to ensure the UK's supply chain remains functioning, but with the right support from the government and businesses, we are confident they can continue their essential work. The UK government has deemed these individuals to be 'key workers' so that they can focus their full attention on the pandemic effort.

Other recent developments will allow the sector to react more effectively to the pandemic. For example, the UK government has confirmed it will work with local authorities to extend the hours in which

deliveries can be made to supermarkets and other retailers. This vital move will help to ensure shops remain stocked with toilet rolls during this period of unprecedented demand.

FTA continues to work closely with the Department for Business, Energy and Industrial Strategy (BEIS), the Department for Transport (DfT), and other government departments to ensure the concerns of our members are heard and acted upon where possible; there is still much to be done to ensure the supply chain continues to operate as smoothly as possible.

FTA has launched a unique free web portal to help the logistics sector keep Britain moving and connected during the Covid-19 pandemic. The portal, which can be found at [www.fta.co.uk/coronavirus](http://www.fta.co.uk/coronavirus), provides visitors with an overview of essential information and advice for the industry, the support provided by FTA, and the business group's requirements of government at such a critical time.

Efficient logistics is vital to keep the UK trading, directly having an impact on more than seven million people employed in the making, selling and moving of goods. With Brexit, new technology and other disruptive forces driving change in the way goods move across borders and through the supply chain, logistics has never been more important to UK plc.

*This article was written for TWM by Sarah Laouadi, European policy manager of Freight Transport Association, a UK-based trade body. It is the only business group in the UK that represents all of logistics, with members from the road, rail, sea and air industries, as well as the buyers of freight services such as retailers and manufacturers whose businesses depend on the efficient movement of goods.*

# TISSUE & PAPER

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Asian Paper is ASEAN's largest paper industry event, established since 1992.



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TISSUE WORLD MAGAZINE

# ECOVA — HELPING TO CREATE A PLASTIC-FREE LINE AT HIGH SPEEDS OF 100PPM

Infinity Machine & Engineering Corp. teamed with Little Rapids Corporation to target market leadership with their new 100% recycled fibre paper overwrap. Ryan Holmer, technical sales, Infinity, is now claiming impressive results.



By Ryan Holmer  
Technical sales,  
Infinity Machine & Engineering Corp.



Over the past six months Infinity has partnered with Little Rapids Corporation to develop advanced designs in a paper overwrap material called Ecova.

Advantages of the Ecova paper overwrap material versus other solutions on the market start with the fact that Ecova is truly 100% plastic free. Also, the Ecova paper overwrap material is made with 100% recycled fibre. There is NOT a thin layer of plastic applied to the paper overwrap material to make it seal inside the wrapper, which would defeat the purpose of being eco-friendly. Instead, with Ecova, a glue is applied to the paper overwrap material during the production process of the paper reel. When the production process is complete, the Ecova paper overwrap reel can be used on a wrapper just like a poly reel. During the initial tests, the Ecova paper overwrap material has been tested and verified using an Infinity Eclipse T4 multi-pack wrapper.

The Infinity Eclipse T4 multi-pack

wrapper operates using four lanes of infeed from an infeed conveyor (five lanes optional) and then separates the product via a servo choke belt infeed into the flight bar stacking section. The machine then synchronises each layer into a secondary flight bar system for loading onto the elevator and then into the overhead system.

The overhead section operates using a brush style head folder system, which creates continuous forward motion on the paper wrap as the ends of the pack are folded. This forward motion helps to achieving high speeds with the paper wrap because the brush system does not pull back on the paper as it is folded, which can also cause jams. In addition, this forward motion creates a higher quality finished package. The overhead unit also features 24 overhead trolleys which reduces the amount of time required for changeovers versus competitors.

The Eclipse T4 unwind system is located directly opposite the roll infeed and is designed to consistently and accurately



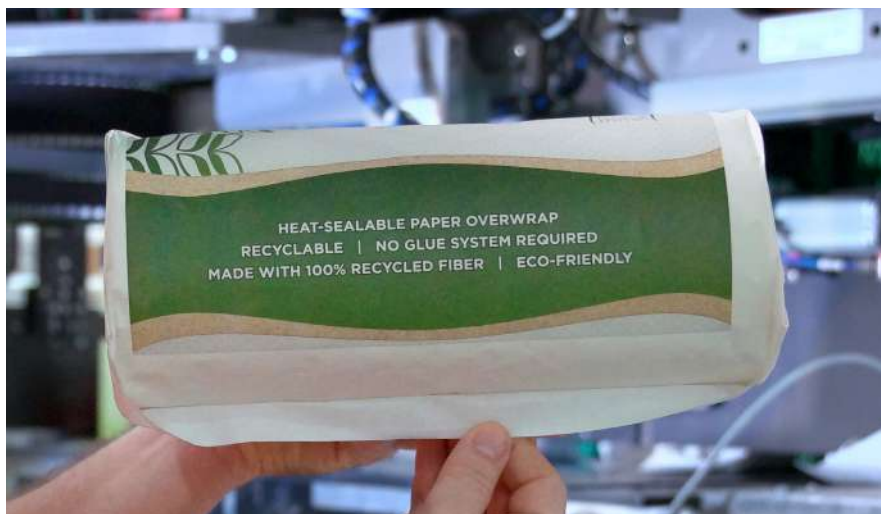
**Consistency and accuracy:** the Eclipse T4 unwind system is located directly opposite the roll infeed



place a sheet of paper overwrap material around the tissue rolls in order to ensure a high-quality finished package. As the collated pack moves through the overhead, the wrapper's bottom sealer and side sealing belts then re-heat the glue to seal the pack, and the perfect paper wrapped pack is created. The glue which was applied before entering the machine means that there is no additional external glue system needed on Infinity's wrapper and no contamination to the machine from an external glue system.

Infinity and Little Rapids Corporation have run the Ecova paper overwrap material in production on two formats including two-pack household towel and four-pack bath tissue. Each of these formats ran without making any machine modifications to Infinity's Eclipse T4 multi-pack wrapper. The Infinity Eclipse T4 multi-pack wrapper was able to achieve speeds of 100 ppm. On these production lines, this was the max output from the winder. Infinity engineering is also confident that we will be able to achieve normal production speeds on faster lines.

In addition, the packs were run through an Infinity conveyor system, Infinity case packer, and Infinity case sealer to create the ultimate eco-friendly line with no plastic used at all! The Infinity case packer and case sealer are an industry standard when it comes to tissue packaging. Infinity case packers are designed to automatically erect a case or tray, collate the incoming product, fill the case or tray, and discharge it onto a



**Advanced performance:** Infinity says it offers the latest eco-friendly options

live roller conveyor to the case sealer.

The Infinity Eclipse T4 multi-pack wrapper, case packer and case sealer, along with the Little Rapids Ecova paper overwrap solution is all engineered to perform and provide an eco-friendly option for the future.

Whether the future of tissue packaging is paper wrap, bio-plastic, cartons, cases,

bundles or standard poly, Infinity along with its various industry partners, like Little Rapids Corporation, have all the tissue packaging technology to advance your company performance.

*This article was written for TWM by Ryan Holmer, technical sales, Infinity Machine & Engineering Corp.*



**INFINITY AND LITTLE RAPIDS CORPORATION HAVE RUN THE ECOVA PAPER OVERWRAP MATERIAL IN PRODUCTION ON TWO FORMATS INCLUDING TWO-PACK HOUSEHOLD TOWEL AND FOUR-PACK BATH TISSUE. EACH OF THESE FORMATS RAN WITHOUT MAKING ANY MACHINE MODIFICATIONS TO INFINITY'S ECLIPSE T4 MULTI- PACK WRAPPER.**



**100% plastic-free:** the perfect paper wrapped pack is created

# THE AUTOMATED CARBON-T AND ADVANCES IN ECOLOGICAL PACKAGING LEAD FABIO PERINI'S PIONEERING PERFORMANCE

Report by Fabio Perini's Giuseppe Alberti, sales manager packaging, Massimo Grandi, regional sales director north, south west Europe and Italy, and Eros Burelli, marketing product manager for packaging equipment



**Giuseppe Alberti**  
Sales manager packaging



**Massimo Grandi**  
Regional sales director North,  
South West Europe and Italy



**Eros Burelli**  
Marketing product manager for  
packaging equipment

A world first automatic trolley changeover on the Carbon-T wrapper, and extensive research to develop integrated level A paper replacements for plastic are helping to maintain Fabio Perini's place at the forefront of tissue technology.

Under the Casmatic brand, the Carbon-T wrapper can be considered as the latest generation of packaging technology based on the Industry 4.0 concept. Its performance demonstrates the many cutting-edge technological innovations used in its design and manufacture.

The use of a large number of carbon fibre components allows the packaging machine to reduce the weight of the moving parts and consequently minimises the sizes of the main motors. Additionally, all the brushless motors used are energy saving to minimise energy consumption.

The introduction of the patented Trolley One Touch system has made the Carbon-T wrapper the first packaging machine in the world equipped with an advanced outfeed drive complete with automatic trolley changeover.

It automatically replaces the number of trolleys needed for each format, avoiding the need for technicians to enter the machine to carry out the necessary operations to change the format. In addition to significant time savings, it also reduces the residual risk on the operators' daily work.

A technology that does not require experienced operators, so even technicians with reduced skills can easily perform format changeovers. Thanks to the new

outfeed trailer, it has also been possible to develop a new software that optimises the comb stroke according to the desired format and consequently has a positive effect on the quality of the side folds.

To make the operator's work even easier, the Carbon-T is also equipped with a new product support (Backplate) with continuous and automatic adjustment that does not need to be replaced and with a new magnetic retention elevator plate that can be easily replaced without using any tools.

As a result, overall operations and maintenance have become much easier when compared to conventional packaging machines; there is a consistent decrease in format changeover times, which results in a general improvement in Overall Equipment Effectiveness (OEE).

Technology hasn't been the only topic that Fabio Perini has been taking care of. Sustainability has also played a key role in the company's recent investments.

The continuous search for alternative materials to plastic has led us to collaborate with suppliers in different geographical areas, finding and developing some of the materials that meet the world's sustainability needs.

Casmatic wrappers can produce packaging using level A (certified recyclable) papers, i.e. those papers that meet the three main requirements of the paper industry:

- allow pulp production at the paper mill under standard conditions;
- allow the formation of the sheet without touching the metal parts;

**THE USE OF A LARGE NUMBER OF CARBON FIBRE COMPONENTS ALLOWS THE PACKAGING MACHINE TO REDUCE THE WEIGHT OF THE MOVING PARTS AND CONSEQUENTLY MINIMISES THE SIZES OF THE MAIN MOTORS. ADDITIONALLY, ALL THE BRUSHLESS MOTORS USED ARE ENERGY SAVING TO MINIMISE ENERGY CONSUMPTION.**

- contain minimum quantities of contaminants to reduce their impact on the papermaking process or wrap with paper that fully supports compostability requirements, certified by the most advanced certification bodies in the industry.

In addition to giving an important environmental impact, the aim of this research was to look for papers that would allow, with a minimum adaptation on packaging machines, to maintain the current performance, thus giving our customers versatile and performing machines without having to economically absorb a change of direction that the whole system requires.

In response to the continuous market demand for ecological packaging, Fabio Perini has recently developed the Biopack Full Kit for its Carbon-T packaging machine.

It has been designed to allow the

packaging of toilet rolls and kitchen towels with ecological packaging material, without compromising production performance and the quality of the finished product. Thanks to the optional Kit, it will be possible to achieve the same performance regardless of the packaging material, whether it is polyethylene or laminated kraft paper.

#### The Biopack Full Kit includes:

- new self-centering shaft less unwinder reel that supports the reel from its central axis – an upper belt transmits the movement to the reel and allows it to unwind;
- flat longitudinal sealer designed to work with kraft paper laminated to eco-plastic materials or with pre-coated glues. Thanks to its quick and plug-in connector, changing the longitudinal sealer is extremely easy and fast, allowing us to change the packaging material (from poly to kraft

paper) in a few minutes;

- modified side sealing to allow for greater temperature control and increase the contact time of the package with the sealing plates. The new sealing exit allows obtaining resistant seals with both polyethylene and laminated papers.

Listening to customers' needs, paying attention to market trends, investing in research and development and taking care of sustainability and environmental impact have been the key elements to strengthen Fabio Perini's position in the tissue packaging market.

*This article was written for TWM by Fabio Perini's Giuseppe Alberti, sales manager packaging, Massimo Grandi, regional sales director north, south west Europe and Italy, and Eros Burelli, marketing product manager for packaging equipment.*

## TT Technical Theme: Packaging

# SMARTER CASE PACKING FOCUSES ON END-OF-LINE THROUGHPUT OF AFH TISSUE PRODUCTS

Packaging's search for optimum operational integration has a new leading product. Here Steve Boothe, senior account manager at Edson, a manufacturer of secondary packaging equipment for the tissue and nonwovens industry, looks forward to a post-pandemic advance for the Model 3600 C compact case packer.



**Steve Boothe**  
Senior account manager,  
Edson

About one-third of the tissue products consumed worldwide are used in AfH commercial and industrial settings such as office and government buildings, hotels, schools, restaurants and commissaries, airports, hospitals and highway rest stops.

These paper napkins, wipes, paper towels, toilet paper and incontinence products are among the most widely used commodities in the world, and are increasingly in demand by institutional and hospitality markets.

Projected to register a global compound annual growth rate (CAGR) of 4.2% during 2017 – 2022, the AfH tissue products market segment is experiencing a growing demand for various products to manage sanitation and hygiene.

And increasingly, government agencies, university campuses, restaurants and hospitals are specifying recycled content tissue and towels to support sustainability

and environmental protection initiatives. Tissue products in various rolls and folds made with high-quality recyclable paper materials is boosting growth in the AfH market.

As AfH product variations continue to evolve to meet the needs of the market, so must technology be adapted to improve production throughput and cost efficiency to deal with increased variations in packaging. This is particularly true with end-of-line packaging.

As an integral part of the tissue industry's manufacturing line, AfH end-of-line packaging systems need to address manufacturing challenges by integrating the latest technology into its processes.

Inherent changes in tissue industry packaging requirements necessitate highly-flexible systems which facilitate quicker changeovers, to accommodate shorter-run and just-in-time orders. This flexibility can be derived from





*Uninterrupted production: tissue plants depend on effective material flow processes*

implementing the right automation to support the fluidity that such throughput requires.

### Case packing designed for AfH tissue products

One of these automated systems is corrugated case and tray packing – essentially, case erecting, packing and sealing – which plays a pivotal role connecting upstream manufacturing and primary packaging of AfH products with downstream warehousing and distribution.

Instead of the plant utilising multiple, dedicated machines for handling various-size case packing requirements, the benefits of operating a singular automated and fully-integrated machine capable of handling a variety of case sizes with quick changeovers between product runs, would present a considerable optimisation of the case-packing process.

The latest evolution of case packers is the Model 3600 C compact case and tray packer from Edson, a manufacturer of secondary packaging equipment for the tissue and nonwovens industry. The focus is on throughput speed and flexibility to handle multiple sizes of cases with quick changeovers.

### Compact case packing

One of the latest technologically-advanced case packing entries into the AfH tissue market, this system handles a wide spectrum of AfH products like rolled tissue, facial tissue, hand towels, folded napkins, diapers and feminine hygiene products. Designed with a small footprint, the case packer is one of the most compact systems in the industry, which allows for easy

**PROJECTED TO REGISTER A GLOBAL COMPOUND ANNUAL GROWTH RATE (CAGR) OF 4.2% DURING 2017 – 2022, THE AFH TISSUE PRODUCTS MARKET SEGMENT IS EXPERIENCING A GROWING DEMAND FOR VARIOUS PRODUCTS TO MANAGE SANITATION AND HYGIENE.**

integration into existing lines with limited space.

The fully-automated, intermittent-motion case packer achieves its small footprint by doing the flap tucking at the loading station. Here is a rundown of its five-station process:

1. Packer Station – the product is correlated and lifted up to the case for packing.
2. Magazine Station – one K.D.F. is separated from the stack.
3. Case Former Station – the case is formed.
4. Case Loading and Flap Tucking Station – the case is loaded with the product, and minor flaps are closed.
5. Sealing Station – glue is applied to the case and compressed for sealing.

Tray packing is an optional add-on, but fully integrates the insertion of standard 2" to 3" high corrugated trays.

### Changeover simplicity

It is fairly typical for changeovers with case packers to take an hour to perform, 30 minutes to make the physical changeover and another 30 minutes to tweak the settings, and in some cases the machine may need to be shut down to get the settings running right.

This latest case packer has implemented optional technology to simplify and

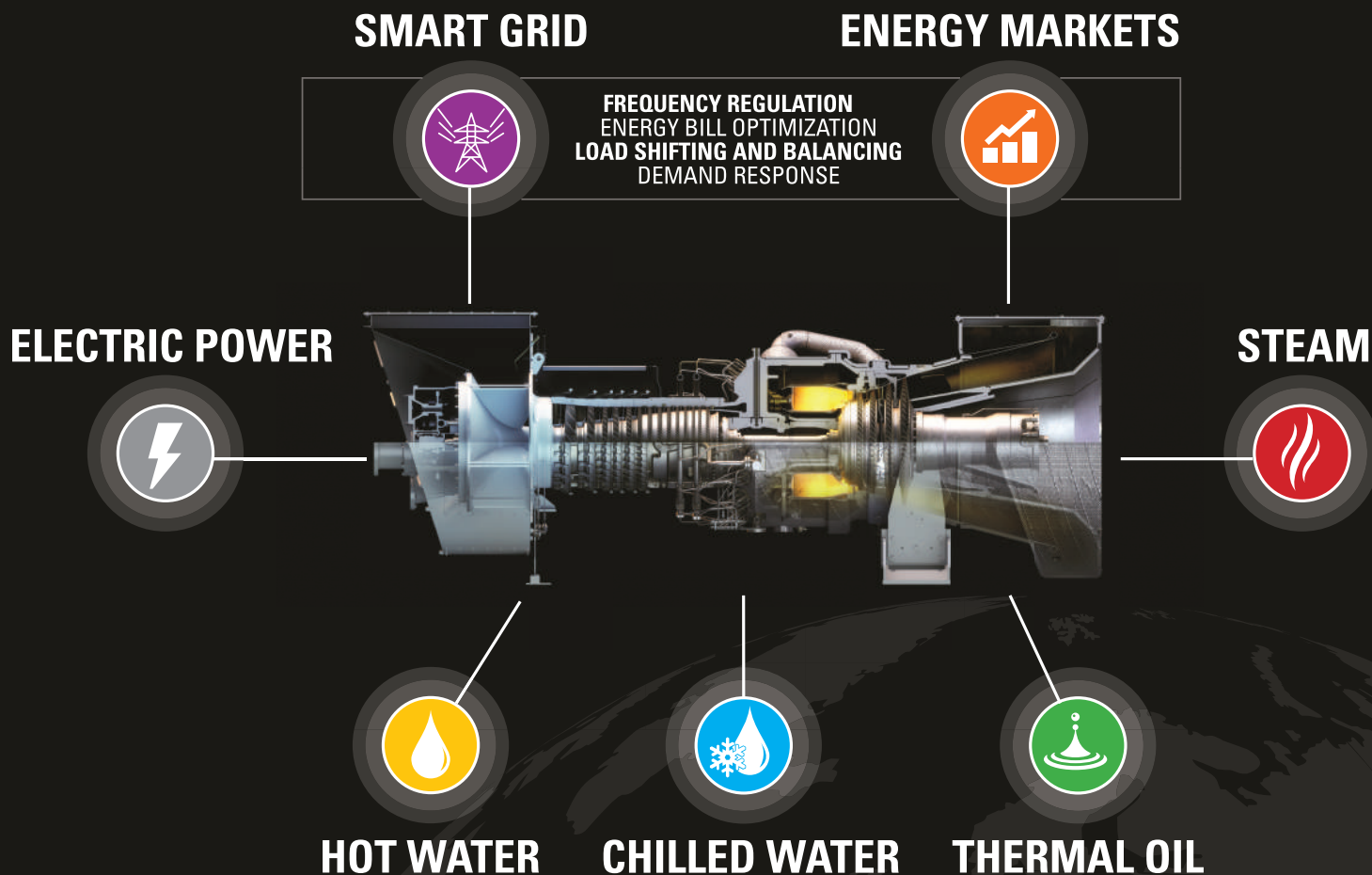
speed up the changeover process to under 15 minutes. Through the machine's touchscreen HMI, the changeover can be effected by selecting from a dropdown menu the pre-loaded recipe configuration for a specific carton format. Servo-motors will automatically change the machine over to ready itself for the selected package size. The operator is required to make several part changes, as well, but the change parts are RFID encoded, so that the machine recognizes that the proper change parts are in place.

Despite its compact size, the 3600 C case packer has the changeover capabilities and flexibility to handle large- and varied-sized cases, topping out at 15 cases per minute throughput. In addition to large case sizes 24" x 24" x 24", the system can run case sizes to 6" x 6" x 6".

Smarter case packing of AfH products  
The entire system is integrated into one smooth operation to streamline product throughput, afford maximum flexibility and optimize labour hours. This latest entry of automated case packers for AfH products provides truly smarter automation, which translates to a better return on investment for tissue manufacturers.

*This article was written for TWM by Steve Boothe, senior account manager, Edson.*

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# ARE TISSUE'S GREEN CREDENTIALS AS GOOD AS ITS MAJOR COMPANIES CLAIM?

A report has claimed that the tissue industry is not as environmentally friendly as it used to be. For TWM, freelance journalist Simon Creasey put the claim to UK-based tissue mills for their response.

\*This article was written for TWM pre-Covid-19

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**Simon Creasey**  
Freelance journalist

Last year a Manchester, UK based not-for-profit environmental magazine asked the question – how green is the tissue industry?

The report, in Ethical Consumer, claimed that in 2019 major toilet tissue brands were using less recycled paper than they were back in 2011.

The magazine argued that growing consumer demand for softer products like luxury four-ply and quilted toilet paper was fuelling the use of virgin pulp. It mainly used global tissue giant Kimberly-Clark (K-C) as an example, stating that the company had actually reduced the use of recycled fibres in some of its products over the last few years.

The report's author Alex Crumbie says the market appears to be dominated by luxury paper products which "appear to depend on virgin pulp," and that while brands "appear to be using" recycled materials "we should be using as much as we can" for toilet paper products in particular.

"Even if the amount of recycled content had increased 1% or 2%, the point would remain that this is still not enough," says Crumbie. "It is absurd to be using virgin pulp when recycled pulp does the job. Even if use of virgin pulp does make toilet paper softer, recycled paper is more than sufficient and is far more sustainable."

He argues that the decline in eco toilet paper ranges and the reduced use of recycled content "appears to have come at the same time" that toilet paper is becoming ever more luxurious.

"So it appears to me that businesses are offering increasingly luxurious toilet paper, which requires more virgin pulp, in order to increase sales. This leaves issues of sustainability side-lined. It does appear that consumers are demanding softer, more luxury toilet roll, so a change in consumer preferences is needed too, but I believe the primary responsibility lies with the [tissue] businesses."

The report – which makes use of multiple sources including Greenpeace, climate and sustainability activists, and the EU Commission and Parliament – states that it "takes the line that toilet paper made using virgin wood pulp, even if FSC certified, cannot be considered a sustainable product. It is hard to justify using virgin wood pulp to make a product that is, by definition, to be immediately disposed of."

This is especially the case when there are "more sustainable" options, and especially when recycled pulp is "easily available."

Among other issues it raises to varying extent are the debate over how suitable FSC certification is for bamboo "as many of the issues regarding the sustainability of tree forests do not apply;" the use of Bisphenol A "found in a number of recycled paper products such as toilet paper;" and pulp alternatives such as bamboo, wheat straw and sugarcane bagasse.

The report – Beyond the bottom line – is mainly UK-centric. Areas it fails to give extensive coverage to include the complex global structure of sourcing recyclable produce as paper use declines, and the major programmes for forest replanting, plastic reduction, and energy sustainability undertaken by major companies.

While offering criticism, the report acknowledges that global tissue giant K-C "has been taking steps to invest in alternative fibres such as bamboo and aims to reduce the use of wood fibre sourced from natural forests by 50% by 2025. In 2017, 76.5% of the fibre it used was virgin fibre."

Approached for TWM, K-C replied: "Kimberly-Clark and Andrex® in the UK have

**THE REPORT – BEYOND THE BOTTOM LINE – IS MAINLY UK-CENTRIC. AREAS IT FAILS TO GIVE EXTENSIVE COVERAGE TO INCLUDE THE COMPLEX GLOBAL STRUCTURE OF SOURCING RECYCLABLE PRODUCE AS PAPER USE DECLINES, AND THE MAJOR PROGRAMMES FOR FOREST REPLANTING, PLASTIC REDUCTION, AND ENERGY SUSTAINABILITY UNDERTAKEN BY MAJOR COMPANIES.**

been, and will continue to be, a leader in sustainability across all our products and packaging – from the materials we use, how we manufacture, to how customers use and dispose of our products. All our innovation in sustainability is currently focused on the Andrex brand as a whole rather than supporting a specific 'green' product. Andrex products are 100% FSC certified and our commitment to responsible fibre sourcing and forest protection has been recognised by the WWF, with K-C awarded the highest rating in its UK-Timber Scorecard.

"At the same time, we are also continuing to evaluate alternative sources of fibres including the use of post-consumer recycled fibres. Our tissue manufacturing remains a priority in our sustainability strategy, and last year, our K-C UK tissue mills delivered zero waste to landfill, a 27% reduction of greenhouse gases and 18% reduction of water usage."

In 2018 K-C's recycled fibre figure "rose to 25.2% versus the reported 2017 number," and it committed to making further inroads in the future.

Many tissue manufacturers in the UK as well as globally have made similarly bold commitments, which is why the likes of Ayaz Tejani, managing director at Leicester Tissue Company, believes the sector is "very mindful" of its environmental footprint and is taking "all measures in manufacturing" to reduce its carbon outlay.

Frank Millward, sales and marketing director at Leicester Tissue Company, says: "This is an ongoing mission and we are doing what we can. On a product front, we are leading the way to champion paper wrap packaging versus plastic on our branded range. The consumer instinctively understands the difference and its impact on land fill and the planet. We are also trialing bamboo paper in both toilet roll and kitchen towel offerings."

Oday Abbosh, founder and chief executive of Better All Round and owner of Consuma, says that in the last year the company has reduced in excess of 10 tonnes of plastic across the range of facial tissues it produces for Tesco and it has also introduced pulp bases to replace the plastic ones its Ora household towel product sits on.

"We have set ourselves a target of being zero waste to landfill, which is more than just about recycling," says Abbosh. "We're in the process of developing product offerings which look at how we can repurpose our manufacturing waste and hope to announce

## MANY TISSUE MANUFACTURERS IN THE UK AS WELL AS GLOBALLY HAVE MADE SIMILARLY BOLD COMMITMENTS, WHICH IS WHY THE LIKES OF AYAZ TEJANI, MANAGING DIRECTOR AT LEICESTER TISSUE COMPANY, BELIEVES THE SECTOR IS "VERY MINDFUL" OF ITS ENVIRONMENTAL FOOTPRINT.

something on this in the near future. We are always exploring and testing alternatives to plastic packaging, focussing on renewable material sources as much as possible and we hope to share more information on this in the coming months. So we're absolutely not standing still and there are several exciting initiatives in the pipeline."

Also not standing still is Northwood Paper, which continuously strives to reduce its environmental impact. The company, which is a supplier of AfH tissue products, recycles more than 55,000 tonnes of tissue-making grades per annum.

"If anything our usage of recycled fibre has increased and we continue to head in that direction," says Paul Fecher, chairman at Northwood Paper. "We are also closing the loop and recovering as much as possible or our own waste material."

He adds that a major issue his company and others like it encounter on a daily basis is the ability to source enough suitable used material. "The electronic age means the availability of material is not as plentiful as it used to be in yesteryear and the quality is also perhaps inferior," says Fecher.

The supply issue is being further exacerbated by the 'war on plastic', which accelerated in 2019. The company is seeing competition for waste material rise considerably as FMCG brands look to switch from plastic into recycled paper-based materials. Then there's the emerging legislative issues around the globe to consider.

"The whole recycled market has been put into a bit of a tailspin because of government interference in China and now it is happening in other countries as well," says Fecher. "Even in Holland where they are limiting the amount of waste they are importing and allowing to be utilised. So it is a much bigger topic than simply saying 'they're (tissue companies) using less recycled fibre than they used to.'"

It's a view shared by Millward, who concedes that some major brands are using less recycled material than they did back in 2011, but there are many reasons behind this shift.

"Recycled grade products – particularly in the toilet roll sector – struggle to meet

the consumer attributes required – namely softness," explains Millward. "It is also one of the few categories where the consumer will not pay a premium for an environmental halo. As a result, the number of de-inking manufacturing facilities has decreased and supply of raw material is difficult to get hold of."

The industry will no doubt continue to receive negative publicity if it fails to reverse the decline in the amount of recycled fibre being used in paper products. Abbosh readily admits there is always more that could be done by businesses operating in the tissue paper sector, as is true of businesses in other industry sectors.

"We are a mature category, which at times can make evolving and making the necessary changes a little harder due to the scale of the business," says Abbosh. "However, at the younger end of the household towel and tissue consumer spectrum, we're seeing an audience which is rightly demanding businesses be more sustainable in the production and manufacture of their products."

"We like to think of our business as having to be able to provide convenience with a conscience, especially with towels and tissues. If we don't, we run the risk of shrinking as a category."

He adds that tissue sector companies need to lead on this from the front while simultaneously keeping an open eye on what else is happening around the world that the industry can take learnings from.

Over the coming years it's anticipated that fewer waste material will be generated because younger generations are printing less and they're not consuming as many newspapers or magazines as previous generations, so the amount of fibre entering the waste stream that is suitable for recycling will significantly reduce.

And with more FMCG brands expected to move from plastic packaging to paper-based materials over the next few years, this will put an even greater strain on the current waste paper supply chain, making it even harder for manufacturers of tissue products to source sufficient material to keep offering recycled products in the future.



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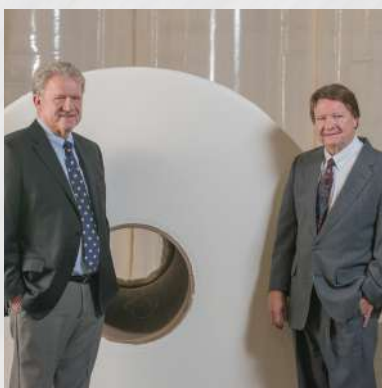
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