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met

The magazine for the hygiene industry

**IMAGINING A POST-COVID-19 WORLD:
STRATEGIC FUTURES AND
IMPLICATIONS FOR THE
NONWOVENS INDUSTRY**

**MILI ADVANCES INTO NEW
MARKETS IN PARTNERSHIP
WITH KÖRBER**

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TURKEY

A.Celli Nonwovens to supply a new end-line to Eruslu Nonwoven Group

The cooperation between A.Celli Nonwovens Spa and Eruslu is further solidified thanks to this supply of winding solutions for Spunlace products.

Eruslu Nonwoven, part of Eruslu Group, is a company located in Gaziantep (Turkey) that since 2004 produces and exports diapers for adults and children, wet towels and pocket wipes to more than 100 countries worldwide.

For the fourth consecutive time, the company has chosen to renew its trust in A.Celli solutions for the nonwoven market by concluding the agreement for a strategic project for both the European and Middle East market.

A.Celli's supply, which will be installed downstream of a cutting-edge line developed by Andritz for the manufacture of Spunlace products with a width of 3600 mm and a grade from 30 up to 75 gsm, will include the following solutions:

- Master roll winder "Stream";
- Off-line slitter rewinder "Rapid" capable of operating up to a speed of 800 m/min and equipped with "DSS" (defect stop system), an integrated solution for the defect tracking and reel segregation to provide defect-free reels;
- Automatic Shaft handling solution with "easy core" positioning device;
- MTS system for quick, simple and precise positioning of the knives by the operators;
- Finished reel handling and packaging system.

The expected start-up date is set for the end of May 2021.

FRANCE

New PMP Intelli-Reel® to be delivered for one of the leading global hygiene company in France

One of the leading global hygiene company reached an agreement with PMP (Paper Machinery Producer) for a new project execution of design, production and commissioning of a new reel Intelli-Reel® in a paper mill, located in France. The contract was signed in July, 2020. The customer is one of the leading global hygiene and health company. This is the first common project of both companies.

A tissue machine produces tissue (basis range from 12 to 24 gsm) from virgin fibers. Its operating speed is 1600 mpm and its reel trim is 5400 mm. A replacement of the reel section is caused by a weak condition of an existing unit and a necessity of implementation of changes related to safety standards.

PMP Intelli-Reel® is a section designed by using state-of-the-art technology to ensure a precisely repeatable, efficient and safe winding process. It is characterized by simple and open structure enabling easy control. Reels provided by PMP guarantees perfect parent roll and continuous & high-speed reeling process.

PMP will provide the complete new reel Intelli-Reel® with controls, a hydraulic unit, necessary installations on site, a tail cutter and controls (PLC). Moreover, the scope of supply contains assembly of a new component and disassembly of an existing one. A finalization of the project is scheduled for spring, 2021.



PMP Intelli-Reel®

BELGIUM

Ontex inaugurates production line for 80 million face masks per year

Ontex unveiled a production line with a capacity of approximately 80 million face masks per year. Ontex's face mask production line is located in its factory in Eeklo, Belgium and already produces one hundred thousand masks per day since August.

"We started producing face masks to help protect essential workers in hospitals and care homes, as well as our employees," said Xavier Lambrecht, President of Ontex's Healthcare Division. "Thanks to automation and more than 40 years of experience in personal hygiene, we can offer hospitals and care homes certified face masks at an attractive price." The new face mask production line was installed in only 100 days. The production line started making face masks in August and is scheduled to produce type 2R medical face masks as of October. Producing masks was Ontex's own decision and the project does not benefit from any government funding.

The production line is located in Ontex's plant for essential personal hygiene goods in Eeklo, Belgium and was officially inaugurated in the presence of Belgian government officials on September 22. Hilde Crevits, Flemish minister for Economy and Innovation said: "It is crucial that we establish here in Flanders and Belgium a strategic production of protective material. I am therefore proud and impressed by the work of Ontex's engineers and technicians, building a fully functional and hygienic mass production line to meet an urgent need in society, in just 100 days. A perfect example of Flanders flexibility and strength." Belgian Federal Minister Philippe De Backer, responsible for the sourcing of face masks during the COVID-19 crisis, said: "I hope millions of people in Belgium and across the world will be better protected thanks to the products made here in Belgium."

The Ontex factory in Eeklo has over 40 years of experience in the production of personal hygiene products and received the 'Factory of the Future' title from Belgian technology association Agoria in 2019 and 2016. The factory employs 550 people and produces products for baby care, feminine care as well as face masks. Type 2R medical face masks with headbands, which create a barrier against tiny droplets and splashes, are typically used in challenging healthcare environments, such as surgery rooms.

In August and September, a first production run of face masks was produced for Ontex employees.



Ontex's face mask production in Eeklo, Belgium

GERMANY

You have a problem – TKM has the solution

In these difficult times (COVID-19) people are getting tired of finding non effective help for their problems in the Tissue converting industry.

Frustrated no matter where they are looking and who they are asking, they are getting no answer nor do they get any help. There is help and there is a simple way to prove it. The TKM Solution APP.

The app has the goal to provide solutions for your everyday work problems.

The TKM Group Solution App is available for both IOS and Android operating systems and can be downloaded free of charge from the Apple and Play Store. Currently the languages German and English are available and in the latest release also French and Dutch. In the future, the app will also be available in Spanish and Chinese.

The perfect solution for you is not available? Then use the app's support function and contact a technical expert by just sending in your problem, or even a picture of the problem, by using the practical photo function. TKM will work out the solution and send it to your cell phone via push notification.

In addition, TKM has also redesigned its homepage, which now has a fresh design with many new features and a comprehensive solution finder. Convince yourself and discover the numerous solution approaches especially in the tissue paper industry and download the app now for free or visit our website: www.tkmgroup.com.



The TKM Group Solution App is available for both IOS and Android operating systems and can be downloaded free of charge from the Apple and Play Store.

ITALY

A.Celli Paper acquires PMT Italia

A.Celli Paper, main affiliate of Italia Technology Alliance group, has acquired PMT Italia - Paper Machinery Technology, a company operating in the production of machinery for tissue and paper industry.

PMT Italia, based in Pinerolo, was born in 2000 but shares a long tradition of expertise and success as former subsidiary of Beloit Corporation. It was in fact, for over 50 years, the main European headquarters of the American group with the name of Beloit Italia. Thanks to its consolidated know-how and skills, PMT Italia has successfully operated in the tissue and paper market for a further twenty years.

With the entry of A.Celli Paper, PMT Italia's range of products will get fresh impetus through synergies with the organization and know-how of A.Celli Paper. The specific and cutting edge technologies developed in the field of packaging papers, cardboard, printing, will be available for the group worldwide customers, and the Customer Service division will be restructured and strengthened as well, in order to guarantee continuity and reliability to customers operating with ex-Beloit / PMT Italia machineries.

“With this operation, carried out in a period of general uncertainty, we want to demonstrate the desire to guarantee cutting-edge technologies and timely assistance for Italian and foreign companies operating in the strategic sector of paper and tissue.» states Mauro Celli, shareholder of Italia Technology Alliance «Maintaining this heritage in Italy is an important step that will bring benefit to the entire paper supply chain, including the district of Lucca.”



A.Celli strengthens its position as main player in the sector by acquiring PMT Italia.

ITALY

Fabio Perini, MTC, and Casmatic consolidate into a global brand: Körber

With the strategic aim of becoming the most advanced and complete supplier in the world of technologies dedicated to tissue, Fabio Perini, Casmatic, and MTC are now unified under one strong brand: Körber. The companies of the Körber Group Business Area Tissue offer holistic solutions for the converting and packaging of toilet rolls, kitchen towels, and folded products.

“Fabio Perini and Casmatic have been the reference points for quality and innovation in converting and packaging in tissue for more than 50 years, while MTC is a world leader in the development, production, and marketing of machines for folded products. Today we unify, reinforce and strengthen this triple capability under a single brand: Körber,” said Oswaldo Cruz Junior, Chief Executive Officer of Körber Business Area Tissue.

“The success of our customers has always been at the center of our innovations in technology,” Cruz said. “We support them with outstanding solutions, an active approach toward market challenges and an unmatched service portfolio and presence around the globe. These tangible benefits for our regional and global customers can lead to more benefits as we combine the competencies of all our companies even more effectively than in the past. So, the new joint brand is a logical step in bringing this strong message to the market.”

The Körber Business Area Tissue provides advanced, automated and easy-to-use integrated solutions — key resources for increasing efficiency via its global team of experts that supports a worldwide customer base. Cruz concluded, “This step represents an important opportunity for our customers, too, as we will be able to meet the most challenging needs for speed, choice, and technologically advanced solutions. We now rely not only on the integrated offerings of the companies of the Körber Business Area Tissue, but also draw from the technology expertise of around 10,000 employees of Körber Group.”

Körber Business Area Tissue

At Körber our ultimate goal is to empower our customers’ ongoing success. We are the only truly integrated and global provider of advanced solutions for the tissue business. We offer the industry’s most comprehensive portfolio of tissue technology to support customers across the entire value chain — from roll to fold, from converting to packaging. Our advanced, automated, and easy-to-use integrated solutions are a fundamental asset to shape success in tissue, take our customers operations to the next level, and strengthen their overall financial performance while optimizing their total cost of ownership.



We
become
Körber

POLAND

Valmet strengthens its business by acquiring PMP Group

Valmet has on September 11, 2020 entered into an agreement to acquire PMP Group in Poland. The enterprise value of the acquisition is approximately EUR 64 million, plus a conditional and capped earn-out component. The acquisition is estimated to be completed on October 1, 2020 at the earliest.

PMP Group supplies process technologies and services for tissue, board and paper machines globally, focusing on small and medium-sized tissue machines and board and paper machine rebuilds. The net sales of the company were approximately EUR 70 million in the fiscal year 2019. The company employs about 650 people, the majority of whom are located in Poland and the rest in China, USA and Italy.

“The acquisition will bring two companies with different offerings and customer segments together. PMP’s technology and services portfolio for small and medium-sized tissue, board and paper machines will be a very good complement to Valmet’s current paper technology and services for wide and fast machines and rebuilds. Together with PMP’s product portfolio, their competence and presence in strategic markets, we will create new business opportunities and further strengthen our capabilities to serve paper, board and tissue producers globally. PMP has a very skilled team and I am happy to warmly welcome them to Valmet,” says Jari Vähäpesola, Business Line President, Paper business line, Valmet.

“Joining to Valmet opens a new chapter in PMP’s rich history in the pulp and paper industry and represents a huge leap forward for our future development. I am convinced that the joint technological, production and human resources in our key markets will allow us to reach new heights and ultimately benefit the advancement of the entire paper industry,” says Mirosław Pietraszek, PMP Group President.

PMP Group is a provider of tissue, paper and board machinery and services. The company has been serving the pulp and paper industry for over 165 years. The 650 employees are located in Jelenia Góra and Świecie in Poland, Changzhou in China, South Beloit in USA and Lucca in Italy.

Toscotec receives forth turnkey order from WEPA

Toscotec will supply an AHEAD 2.2S tissue line on a full turnkey basis to WEPA Piechowice mill in Poland. The project is planned in a short time frame, with start-up set for the third quarter of 2021. This is a repeated turnkey order for WEPA Piechowice mill, where an AHEAD 2.0S machine supplied by Toscotec on a turnkey basis came online in 2017.

WEPA selected Toscotec for the turnkey supply of the last three tissue machines it installed since 2015, including WEPA Lille in France, WEPA Giershagen in Germany and WEPA Piechowice. Previously, Toscotec had supplied other two complete machines to WEPA Sachsen in Kriebstein, and to WEPA Giershagen. This new AHEAD 2.2S in Poland will be the sixth tissue line that Toscotec delivers to the German Group, in addition to the numerous rebuilds it completed over the years for the wet end and dry end sections of WEPA’s existing machines. Recently, WEPA Giershagen PM19 achieved the constant operating speed of 2,200 m/min, setting a new world record in the tissue industry for machine speed in continuous running conditions.

The new AHEAD 2.2S machine features a 2750 mm sheet trim width and a design speed of 2200 m/min. It will produce over 40,000 t/y of premium quality tissue mainly for the Away-from-Home market, made of either virgin or deinked pulp (DIP).

Martin Kregel, CEO of WEPA Group said, “As in the past, we have great confidence in Toscotec and are convinced that we have the right partner with the latest technology on our side for this project. We continue to trust Toscotec for their commitment to our efficiency and product quality, their operational flexibility and their ability to fully meet our demands.”

WEPA is one of the three largest European manufacturers and is market leader in the production of hygiene paper made of recycled fibres. The annual turnover amounts to approximately 1.3 billion euros.



WEPA Piechowice mill



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AMOTEK

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We've teamed up with manufactures of the urgently needed PPE in order to deliver effective solutions for a common WIN!

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POLAND

Filar starts up its first tissue machine for high-quality tissue

Filar Fijałkowski Sp. located in Sadlno, in the Gmina Wierzbinek region in Poland, started up its first tissue machine for high-quality tissue paper.

The machine - supplied by HERGEN - is the EVO 12 model, with the HCF 1225 Crescent Former, a Suction Press with a diameter of 1,050 mm and a 3,660 mm Yankee Cylinder made of steel.

Designed to work at 1700 m/min, the machine will produce 70 t/d of two-ply paper (15 g/m²) and up to 100 t/d of other types of paper.

The project has two lines of pulp (hardwood and softwood), which allows for working with products that present excellent softness and resistance characteristics.

The machine is part of the company's largest investment in the sanitary paper business. A brand-new factory was built. In addition to the machine, the facilities also have a logistics center. The successful startup occurred amid the challenges generated by the coronavirus pandemic.

Taking the necessary precautions to ensure the safety of all those involved, Filar once again showed its capacity to overcome challenges and managed to successfully fulfill this great venture.

Hergen also had to adapt to the new circumstances and, in view of the current staff commute restriction, made its first remote launch.



Filar startup team

CHINA

Guangdong Hengan boosts capacity with four tissue machines

ANDRITZ has received an order from Guangdong Hengan Paper Co., Ltd. (Hengan) to supply four tissue machines to its new mill in Yunfu, Guangdong, China, for the production of high-quality facial, toilet, handkerchief and napkin tissue grades made of virgin market pulp.

Each of the new tissue machines is of the type *PrimeLineCOMPACT M 1600* with a design speed of 1,700 m/min and a working width of 3.65 m. All of them are equipped with a proven *PrimeFlow* step diffusor headbox for superior formation quality. The 18 ft. *PrimeDry* Steel Yankee together with the high-load suction pressure roll and canopy hood ensure high drying capacity at reduced energy consumption compared to conventional drying systems. The scope of supply also includes an under-machine pulper.

The technical characteristics of this compact solution for tissue production will significantly reduce steam and electric power consumption in the production process and minimize operating costs, thus resulting in low maintenance costs.

This order confirms the successful partnership by Hengan and ANDRITZ that started in 1998 when Hengan bought its first ANDRITZ tissue machine for the mill in Changde city. In the meantime, Hengan has thirteen ANDRITZ tissue machines in operation, with the four new ones being scheduled to go into operation as from the fourth quarter of 2021. Mr. Xu Lianjie, CEO of the Hengan Group confirms: "Hengan and ANDRITZ have been working together successfully for more than twenty years. We have succeeded as partners and believe in a promising future because making the best tissue always starts with the best equipment."

The Hengan Group, founded in 1985, is a leading Chinese manufacturer of household paper grades as well as feminine hygiene and baby care products.

CHINA

Baosuo Enterprise Group provides tissue making systems to Lee & Man Paper

Baosuo Enterprise Group provided Lee & Man Paper Manufacturing with a tissue production project of an annual output of 310,000 tons to Jiangxi and Chongqing sites in China. The scope of supply included:

- Jianxi Lee & Man base: 9 sets of BC1300-2850 Crescent Former Tissue Machine, with a total production capacity of 180,000 tons.
- Chongqing Lee & Man base: 4 sets of BC1300-2850 Crescent Former tissue machine; 1 set of BCS600-3550 hand towel tissue machine; 1 set of BC1300L-2850 Crescent Former tissue machine for the production of napkin paper, with a total production capacity of 130,000 tons.

In addition to the tissue paper machines, the auxiliary systems, electrical and automation controlling systems, and the engineering design, installation and commissioning guidance services required in the production systems are also included in the scope of supply. Supply started in 2017 and will be completed at the fourth quarter of 2020.

Lee & Man is a leading pulp and paper manufacturer with an annual production capacity of more than 7.165 million tons in the paper industry (packaging paper 6.26 million tons, pulp 180,000 tons, tissue paper 725,000 tons). It is estimated that by the end of 2020, Lee & Man Group's annual production capacity of tissue paper in China will exceed 1 million tons.

The cooperation between Baosuo Enterprise Group and Lee & Man Paper Manufacturing Ltd in the production of tissue paper began with the 11# tissue project in Jiangxi, China. The equipment supply, installation and commissioning services of 6 sets of tissue making systems in this project were all provided by Baosuo Enterprise Group, the project has been put into operation in October 2019.

The excellent performance of Baosuo Enterprise Group's equipment, the existing foundation of successful cooperation and fast-response services are the reasons for Lee & Man's continuous procurement of Baosuo's equipment. Moreover, Lee & Man Paper Manufacturing Ltd will continue purchasing tissue machines manufactured by Baosuo Group for its multiple production sites at home and abroad to meet the company's requirements for the tissue industry.

Established in 1989, Baosuo Enterprise Group is a well-known corporation specialized in providing paper machines, tissue converting machines, tissue packing machines, and electric intelligent systems. As a turnkey solution supplier in China for high-end tissue paper machinery, Baosuo Enterprise is dedicated to providing the best tissue production turnkey projects and first-class service from design, manufacturing to installation.



Baosuo BC1300 - BC1600 Crescent Former tissue machine

INDONESIA

Kimberly-Clark acquires Softex for US\$ 1.2 billion

The \$1.2b all-cash transaction has been agreed with a group of shareholders including CVC Capital Partners Asia Pacific IV.

Kimberly-Clark Corporation has acquired Softex Indonesia, a leader in the fast-growing Indonesian personal care market, in an all-cash transaction for approximately \$1.2 billion from a group of shareholders including CVC Capital Partners Asia Pacific IV.

Since 1976, Softex Indonesia has built a successful personal care business with strong market positions and has consistently delivered double-digit growth. The company has excellent manufacturing capabilities and a strong go-to-market distribution network. Softex Indonesia generated net sales of approximately \$420 million in 2019.

The transaction is expected to close early in the fourth quarter of 2020 and is subject to customary closing conditions. Morgan Stanley & Co. LLC and Centerview Partners LLC acted as financial advisors, and Gibson Dunn and Crutcher LLP acted as legal counsel to Kimberly-Clark on the transaction.

“This acquisition accelerates our growth with strong market share in key personal care categories across Southeast Asia’s largest economy,” said Mike Hsu, Chairman and CEO, Kimberly-Clark. “As we move ahead, we will leverage our combined strengths in innovation and brand building while maintaining the local market expertise and advantages that Softex Indonesia has built with its strong portfolio of brands.”

VIETNAM

Xuong Giang Paper Mill to install a new tissue machine

ANDRITZ has received an order to supply a complete *PrimeLineCOMPACT S 1300* tissue machine with stock preparation system to Xuong Giang Paper Mill, Vietnam, a subsidiary company of Bac Giang Import Export JSC. The new line has a design capacity of 54 tons/d, a design speed of 1,300 m/min and a paper width of 2.85 meters. It will process virgin pulp as raw material to produce high-quality facial and toilet tissue as well as napkins. Start-up is scheduled for the fourth quarter of 2020.

The stock preparation plant is split into separate short fiber and long fiber systems and also includes the approach flow system, fiber recovery and broke handling equipment, and pumps.

The tissue machine has a 12-ft. *PrimeDry* Steel Yankee, equipped with a steam-heated hood to ensure highly efficient drying and substantial energy cost savings compared to operations with a cast iron Yankee and gas-heated hood. The Yankee will be manufactured at the ANDRITZ Steel Yankee Business Center located in Foshan, China.

This ANDRITZ *PrimeLineCOMPACT S 1300* is the third tissue machine to be supplied by ANDRITZ to the Vietnamese market in recent years.



ANDRITZ *PrimeLineCOMPACT S 1300* tissue machine.
Photo: ANDRITZ

TAIWAN

Freudenberg starts up new production line

Freudenberg Performance Materials completed the installation of a state-of-the-art spunlaid line in Taiwan and will begin production of nonwovens for diverse markets.

The new production line is the first to feature the latest spunlaid technology developed by Freudenberg. The technology enhances filament distribution for increased material uniformity, which in turn provides customers with ease of processing the nonwovens for a variety of applications. The line also utilizes AI technology to detect variances in the material and automatically adjust uniformity as well as a high-grade IR camera to identify small melt defects. “The expansion of our capabilities underscores our long-term commitment to Asia. We want to continue to support our customers in the automotive and carpet markets with innovative and sustainable solutions that will help them grow,” Dr. Frank Heislitz, CEO of Freudenberg Performance Materials.

In addition to new, proprietary technology, the production line features enhancements to reduce environmental impacts. All parts used in construction were selected based off their energy efficiency to lessen CO2 emissions during operation. The Taiwan site also invested in a new recycling system to recycle all start-up materials as well as scrap materials during normal operations; the recycling line will help the team in their goal to reach zero-waste operations. The spunlaid line will also run partially on solar energy supplied from panels installed on site early last year.

“The new production line will not only allow us to better serve our customers in Asia, but also do so in a sustainable way. We are always researching and implementing new ways to reduce our carbon footprint and that was something we focused on heavily while building up the line – how we could make our operations better for the product and the environment,” Lin Gow Ming, President of Freudenberg Far Eastern Spunweb.



Freudenberg state-of-the-art spunlaid line

URUGUAY

Metris DryQ from ANDRITZ improves performance at Montes del Plata

The new intelligent solution for pulp drying, Metris DryQ, developed by international technology group ANDRITZ, is operating successfully at the Montes del Plata pulp mill in Punta Pereira, Uruguay. It was installed in September 2019 as part of a mill-wide service agreement called SYNERGY, which includes remote support and local assistance by ANDRITZ experts, with the aim of boosting dryer performance and stabilizing the process.

Gabriel Machado, in charge of the Montes del Plata fiberline, says “We have been very impressed with ANDRITZ’s professional and transparent approach to the Metris DryQ project since the very beginning. The experts involved, both at the mill and remotely, support us in every aspect of drying line operations. We now have a drying line that is performing in a much more stable and efficient way. It gives us a lot of confidence to have ANDRITZ experts right with us as we deal with any challenges that may arise.”

Metris DryQ combines ANDRITZ’s long-standing pulp drying expertise with the latest digital technologies and thus provides crucial support for customers in achieving their production and sustainability targets. The Metris DryQ team analyses available plant data, compares it with data already gathered, evaluates the results based on decades of expertise and thus provides valuable output for business intelligence, quality management and process information. These results play a vital role in increasing the efficiency of systems already installed and thus secure high drying line performance.

Under the brand name Metris, ANDRITZ offers a broad and constantly growing range of innovative products and services in the industrial digitalization sector, helping customers to enhance plant efficiency and profitability, optimize the use of resources, achieve constant and highest product quality, reduce production downtime and maximize user-friendliness.



Metris DryQ installed at Montes del Plata. Photo: ANDRITZ

RUSSIA

ANDRITZ PrimeLine™ W6 tissue machine at Arkhbum Tissue Group delivers top quality

The 5.6 m wide *PrimeLine™* W6 tissue machine that was delivered by ANDRITZ to Arkhbum Tissue Group LLC in Vorsino (Kaluga region), Russia, reached a speed of 2,000 m/min with a grammage of 16 g/m² and is now producing high-quality facial, toilet, napkin, and kitchen towel grades made of 100% virgin pulp (bleached hardwood and softwood pulp).

Irina Galakhova, Chairman of the Board of Directors, Arkhbum Tissue Group LLC, says: “We are extremely satisfied with our products – and so are our customers. We appreciate the high quality and softness. In addition, we achieve remarkable cost savings compared to systems with conventional presses and Yankees.”

The ANDRITZ tissue production line features a Papillon refiner in the stock preparation plant to achieve superior fiber properties at low energy consumption. The tissue machine’s steel Yankee and ANDRITZ’s latest shoe press technology enable a high drying capacity and operating flexibility. The re-evaporation system installed brings energy back into the production process, thus enabling additional savings. ANDRITZ delivered the *PrimeLine™* W6 tissue machine together with the stock preparation and approach flow system, heat recovery re-evaporation system, hall ventilation and heating, automation, and electrification.



Successful operation of the ANDRITZ *PrimeLine™* W6 tissue machine with the latest *PrimePress XT Evo* shoe press technology at Arkhbum Tissue Group LLC in Russia. Photo: ANDRITZ

Valmet receives the eighth tissue line order from Hayat Kimya

Valmet will supply the eighth tissue line delivery including an extensive automation package to Turkish tissue producer Hayat Kimya. The company has decided to invest in a third machine in Russia in order to meet the increasing demand for their high-quality tissue products. This is the first machine at their new mill outside Moscow. The new line will add 70,000 tons of tissue to company’s current production of facial, toilet and towel tissues.

Hayat Kimya, the current world speed record holder with their TM2 tissue machine in Turkey supplied by Valmet, is constantly targeting latest technology to reach the highest efficiency and the lowest possible energy consumption. Previously the company has installed six Valmet Advantage DCT 200TS tissue production lines to its mills in Turkey, Russia and Egypt with one more starting-up in 2021.

“Our ambition is to run at high efficiency and Valmet’s technology is certainly supporting that target. We are regularly updating our machine fleet to make sure we always operate at optimum production level. We find both Valmet’s technology and people easy to deal with,” says Lütfi Aydın, Director, Paper Group, Hayat Kimya.

“We are excited to be part of Hayat Kimya’s successful journey. The company started only fourteen years ago and is already a world player, who will soon have nine tissue lines in operation,” says Björn Magnus, Sales Director, Tissue Mills business unit, Paper business line, Valmet.

The new TM9 Valmet Advantage DCT 200 TS will have a width of 5.6 m and a design speed of 2,200 m/min.

The raw material to be used in the tissue production will be virgin fiber. The new production line is optimized to save energy and to enhance the quality of the final product.

Hayat Kimya A.S. is part of the Hayat Group. The Hayat Group primarily operates in the home care, hygiene and tissue categories for the consumer goods industry. Hayat has continued to invest significantly since their entrance into the tissue category 14 years ago and today the Group carries “The Largest Tissue Manufacturer of Africa, Middle East and Eastern Europe” title with 490,000 tonnes production capacity/year.

Select Products Holdings invests in full tissue solution from PCMC

PCMC, part of Barry-Wehmiller, has announced the recent milestone sale of a full tissue solution to Select Products Holdings LLC. The order includes a PCMC Amica consumer rewinder line (photo), a STAX Prima wrapper, a STAX RCP-15 case-packer and all connecting conveyors. The offering became possible after PCMC acquired STAX Technologies in late 2019. Less than a year later, PCMC is prepared to install its first rewinder-through-case-packer turnkey solution in North America.

Select Products plans to install the equipment at a new southern US plant by the end of 2020. The goal is to start delivering products outside of the company's current distribution areas around New York and Pennsylvania as soon as possible. "There is a tremendous sense of excitement to get the PCMC equipment," said Galante. "We wish we could have received it this summer, because the COVID-19 pandemic is causing many people to use private-label brands when no other products are left in the stores. By putting the new Amica line and STAX equipment in the new plant, we will be able to distribute product all the way through the southern and central United States."



PCMC Amica rewinder line

Ontex announces plans for its first U.S. manufacturing facility and the acquisition of U.S. feminine hygiene assets

Ontex Group NV announced plans for a new personal hygiene manufacturing plant in Rockingham County, North Carolina. The new facility is scheduled to start production in mid-2021. Ontex also announced that it has entered into an agreement with Albaad Massuot Yitzhak Ltd. to acquire their feminine hygiene production assets in Rockingham County.

The North Carolina location was selected because approximately half the U.S. population lives within a 1,000 km/650-mile radius. The strategic location of Rockingham County, the quality of the workforce, as well as state and local incentives were compelling factors in the company's decision to locate the new facility in Rockingham County.

Ontex' agreement with Albaad covers the production lines and related equipment in Rockingham County as well as a license for all corresponding inventory and intellectual property. The production lines produce feminine hygiene pads. Ontex will benefit from an experienced team of new colleagues who will join the Ontex Group and operate the acquired equipment. This acquisition strengthens Ontex's growing feminine hygiene business in North America, providing more robust supply capabilities and options for current and prospective customers.

"The successful acquisition of Grupo Mabe (Mexico) in 2016 provided Ontex with leading brands and positions in Baby Care and Adult Care in Latin America, as well as a fast-growing business of Baby Care products in the U.S. and Canada", said Armando Amselem, president of Ontex' Americas, Middle East, Africa and Asia Division. "Our solid performance and business growth prospects triggered the need for local production in the eastern United States and adding Albaad's Rockingham County feminine care production assets will expand our offering to retailers and provide new options for us to grow further in this important market."

Solenis Completes Acquisition of PoliQuímicos, S.A. de C.V.

Solenis LLC completed the acquisition of 100% of the outstanding shares of PoliQuímicos, S.A. de C.V.

Headquartered in Mexico City, Mexico, PoliQuímicos is a leading producer and supplier of specialized chemical solutions for water-intensive industries, including the pulp and paper markets in Mexico. The business will be integrated into Solenis as part of its direct-to-market strategy.

"The acquisition of PoliQuímicos will enhance Solenis' direct sales channel in the Mexican market and improve our production capabilities in the region," said John Panichella, CEO, Solenis. "With more than 46 years of history in Mexico,

we are thrilled to welcome the PoliQuímicos team and are excited to provide them with the full suite of Solenis products to better serve our customers."

"The strategic location of the PoliQuímicos production facility, a strong position in the packaging market, along with a talented commercial team, provides Solenis the opportunity to better serve the Mexican market," said José Armando Piñón Aguirre, vice president, Latin America, Solenis. "We will integrate the PoliQuímicos' business into Solenis during the next few months to ensure a seamless transition for customers in Mexico."

BRAZIL

H.P. Papéis to install Tissue Machine in the Northeast region

H.P. Papéis, a company located in the municipality of Volta Grande, MG, is starting a major undertaking that includes the installation of two Tissue Machines in northeastern Brazil, more precisely in the state of Pernambuco.

The project foresees two deployment phases. The first, already underway, for installing the first machine and scheduled for completion in 2021. Then the second phase begins, for installing the second Tissue Machine in this same industrial park, scheduled for 2022.

The machine of this first phase – already negotiated with HERGEN – is the EVO 16 Eco model, which has one of the best cost-benefits in the market, being able to produce from double sheet to tissue with excellent quality and low production cost.

The machine will be equipped with a grooved 4,880 mm diameter Smart Yankee Dryer cylinder (16'). The excellent drying capacity of the Hergen cylinder will allow, in the first phase of the project, the machine to reach a production of 21,600 tons/year of double-sheet paper (14.5 g/m²), using only the cylinder's drying potential.

Hergen machines are designed with a modular concept, which allows for future upgrades. With the installation of a gas canopy and the upgrade of peripheral systems, the machine will be able to reach production above 30,000 tons/year.

Hergen congratulates H.P. for its bold project and for showing that it believes in our country's potential for the tissue paper market. It is an honor for us to be part of venture.



Hergen's EVO 16 Eco tissue machine

Guapi Papéis installs a new off-line multicut rewinder

The new off-line Rewinder produces sliced baby rolls which aim for the manufacturing of toilet paper rolls cores.

The Unwinder will have the capacity for jumbo rolls of a variety of diameters (500 to 1,500 mm) and widths (400 to 2,500 mm), in addition to being able to collect the rolls from the floor and without shafts.

To ensure the separation of the multiple cuts, the Rewinder with a design speed: 1,000 m/min is equipped with a Tandem System, which features two bowed rolls with curvature position adjustment and paper web wrap angle. The slitting system features 36 slitters sets, and the baby roll diameter varies from 500 to 1,500 mm

IPEL achieves exceptional performance with its new TM5

Indaial Papel Embalagens Ltda (IPEL) new Tissue Machine – TM5 – has been running since September 2019. The great advantage of the project is that, in this first stage, the machine – model EVO 16 ECO, supplied by Hergen – works without a Hood, relying only on the Yankee Cylinder for sheet drying.

A Fan Guard was installed in place of the Hood, which simply aims to extract the steam generated by drying the paper. The Hood uses only two small fans with extremely low energy consumption. This setup allows the extraction of maximum machine performance.

The results in this first stage have been excellent. Initial production estimates were reached and even exceeded. On July 16, the customer recorded a production of 71.1 t/d.

The TM5 excellent performance is due to the extreme drying capacity of the Smart Yankee Dryer. Built in steel and with a grooved internal surface, they allow for greater heat exchange and, consequently, greater drying efficiency.

The expressive numbers registered so far point to a very promising second stage, following the Hood installation. In this first stage (without the Hood), the machine reached a production capacity of 70 t/d for double sheet paper (14.5 g/m²), running at 1,500 m/min.

In the second stage, with the Hood installation, the machine will be able to exceed 85 t/d for double sheet paper, running at 1,800 m/min.

THE TISSUE QUALITY SYSTEM



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DISCOVER MORE



MILI ADVANCES INTO NEW MARKETS IN PARTNERSHIP WITH KÖRBER

With the largest production capacity in South America from a single location, Brazilian manufacturer Mili leverages advanced technology and a strategic alliance with Körber Group for continued growth.





Mili, plant floor and conversion lines, Três, Barras.

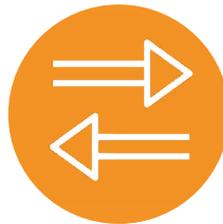
Founded in the interior of Santa Catarina, in the municipality of Três Barras, Mili is a source of pride in Brazil. With a single-location annual production capacity of up to 200,000 tons, Mili is proudly recognized as one of the largest tissue paper manufacturers in Latin America. It is also “Latin America’s largest single-serve tissue paper converting operation,” as described by Mili Founding Partner and President Valdemar Lissoni. These notable achievements distinguish Mili as a respected tissue industry leader. They also point to the hard work, reinvestment in factories, and commitment to team development that Mili prioritized during its decades-long rise to the top — and still focuses on today. Building and relying on strategic partnerships is central to this core philosophy, and perhaps best illustrated by the flourishing 37-year relationship between Mili and Körber.

Strategic Thinking, Advanced Technologies

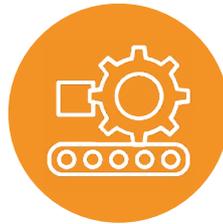
“It’s common knowledge within our company that the Körber team, with their Perini and Casmatic machinery, has been the best technical and commercial partner throughout our history,” said Daniel Signori, Mili Technical Director. This statement is backed up by Mili’s conversion lines, outfitted exclusively with Perini-branded technologies and equipment. Signori explains, “Including all of the world group brands, Mili has more than 20 conversion lines, all with signature Casmatic packaging lines as front-ends, and technologies spanning Perini Sincro, Perini Mile 4.5, Perini Time, and most recently Perini Constellation™.”



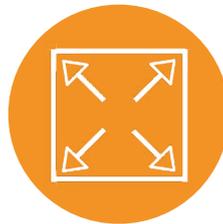
7
paper machines



20
conversion lines,
all from Körber



162,000
tons/year of production
volume



240,000
tons/year of installed
capacity



162,000
of built area installed
within a total area of
more than 1 million m²

In fact, adding five Perini Constellation rewinders to the mix was what Signori deems “a watershed moment for Mili’s operation standards.” The highest-speed and highest-performance rewriter in the world is allowing the company to pursue the premium tissue market and maintain its position as an industry leader well into the future.

“Perini Constellation brings speed, reliability, and greater quality to Mili products. Combined with the broader expertise, flexibility, and efficiencies resulting from Körber Tissue consolidating its Fabio Perini, MTC, and Casmatic brands, we believe — we know — we can help our trusted partner go further,” said Dineo Silverio, President of Körber Business Area Tissue, for Latin America

Perini Constellation: Innovation and Technology to Reach New Markets

Perini Constellation is the most sophisticated and advanced tissue paper conversion line available. Its S6 and S8 versions (with speeds of 600 m/min and 800 m/min, respectively) are the highest-speed and highest-performance machines in the world, and they represent a significant step forward in the evolution of perfect rolls.

Equipped with combined central and surface controls, four rollers, and the renowned Italian Punzoncini technology system that controls log formation through the core, Perini Constellation radically transforms the winding concept. Further, the easy and intuitive HMI panel allows operators of all experience levels to efficiently interface with and handle the machines.



Mili Founding Partner and President Valdemar Lissoni and Claudio Munoz, Marketing Director of Körber Business Area Tissue for Americas.

Recent feedback from Perini Constellation customers around the world reflects the positive impact of the revolutionary 4-roll rewinding process – over 93% percent report being highly satisfied with product quality. In addition, Claudio Munoz, Marketing Director of Körber Business Area Tissue for Americas reported that all customers achieved efficiency gains. “Over 85% saw increases in production speed and 80% noticed reduction in machine downtime” commented Munoz. “Plus, more than 100 lines have been sold worldwide since the technology’s launch in 2015.”

In light of these advanced technologies and differentials, Perini Constellation ensures uniform rewinding at all speeds and perfect rolls from the first to the last sheet. It also allows for production of the widest range of extremely soft, high-bulk rolls on the market — a value-add in the eyes of consumers and a considerable competitive advantage for Mili.

“The product quality jump provided by Perini Constellation makes Mili a major contender in the premium market,” Signori explained. “From everything we know and have tested, Perini Constellation is simply the best option in the market for combined high technology, versatility, and efficiency.”

Signori was also quick to point out the operational benefits. “We are always seeking to balance the equation of lower cost and maximum efficiency in our lines. Perini Constellation gives us the capacity for the best operational result, supported by Körber resources that introduce a much wider range of possibilities than our previous lines.”

“From everything we know and have tested, Perini Constellation is simply the best option in the market for combined high technology, versatility, and efficiency.”



Daniel Signori, Technical Director, Mili S/A



Mili is one of the top producers of premium tissue products in Brazil.



Perini Constellation uses the revolutionary 4-roll rewinding process.

As Mili leans into the future, the company continues to lean on the 37-year relationship it has with Körber, which recently strategically consolidated its three respected tissue companies — Fabio Perini, Casmatic, and MTC, under one brand: Körber. The power and potential of Körber, providing complete converting and packaging solutions for toilet paper rolls, kitchen towels, and folded products, provides Mili the foundation for continued success through maximum efficiency, sustainability, and innovation as it serves the markets of Brazil, Mercosur, and beyond.

ABOUT KÖRBER

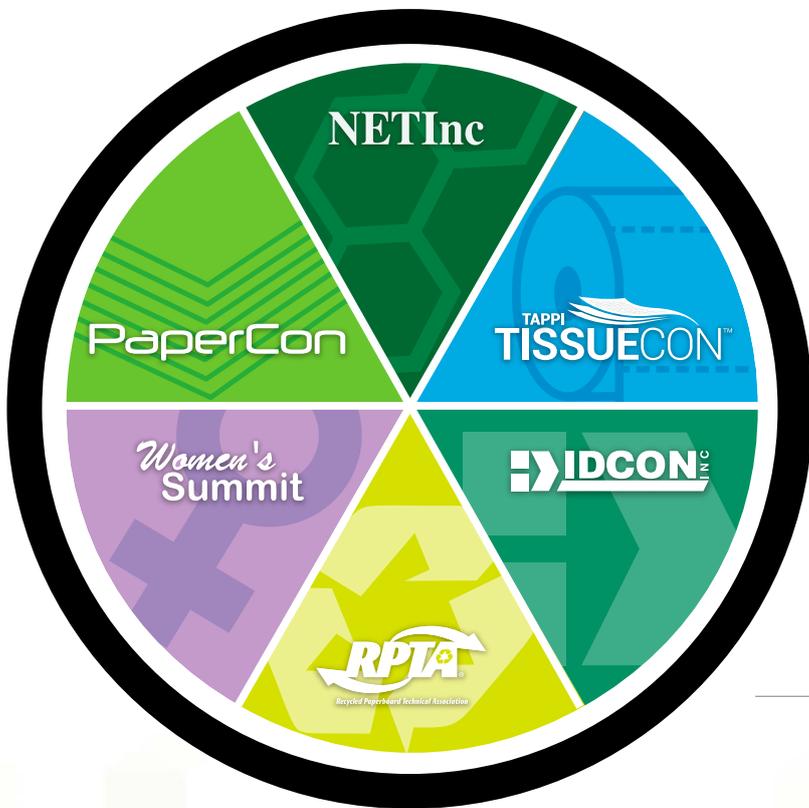
An international technology group with about 10,000 employees, more than 100 locations worldwide and a common goal: to turn entrepreneurial thinking into customer success and shape the technological change. With 5 business areas — Digital, Pharma, Supply Chain, Tissue, and Tobacco — Körber Group offers products, solutions, and services that inspire, responding quickly to customer needs, executing ideas seamlessly, and with innovation to create added value for customer. In doing so, we aim to increasingly build ecosystems that solve the challenges of today and tomorrow.



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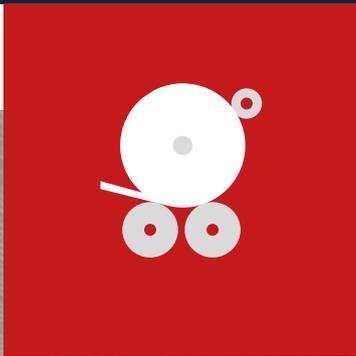
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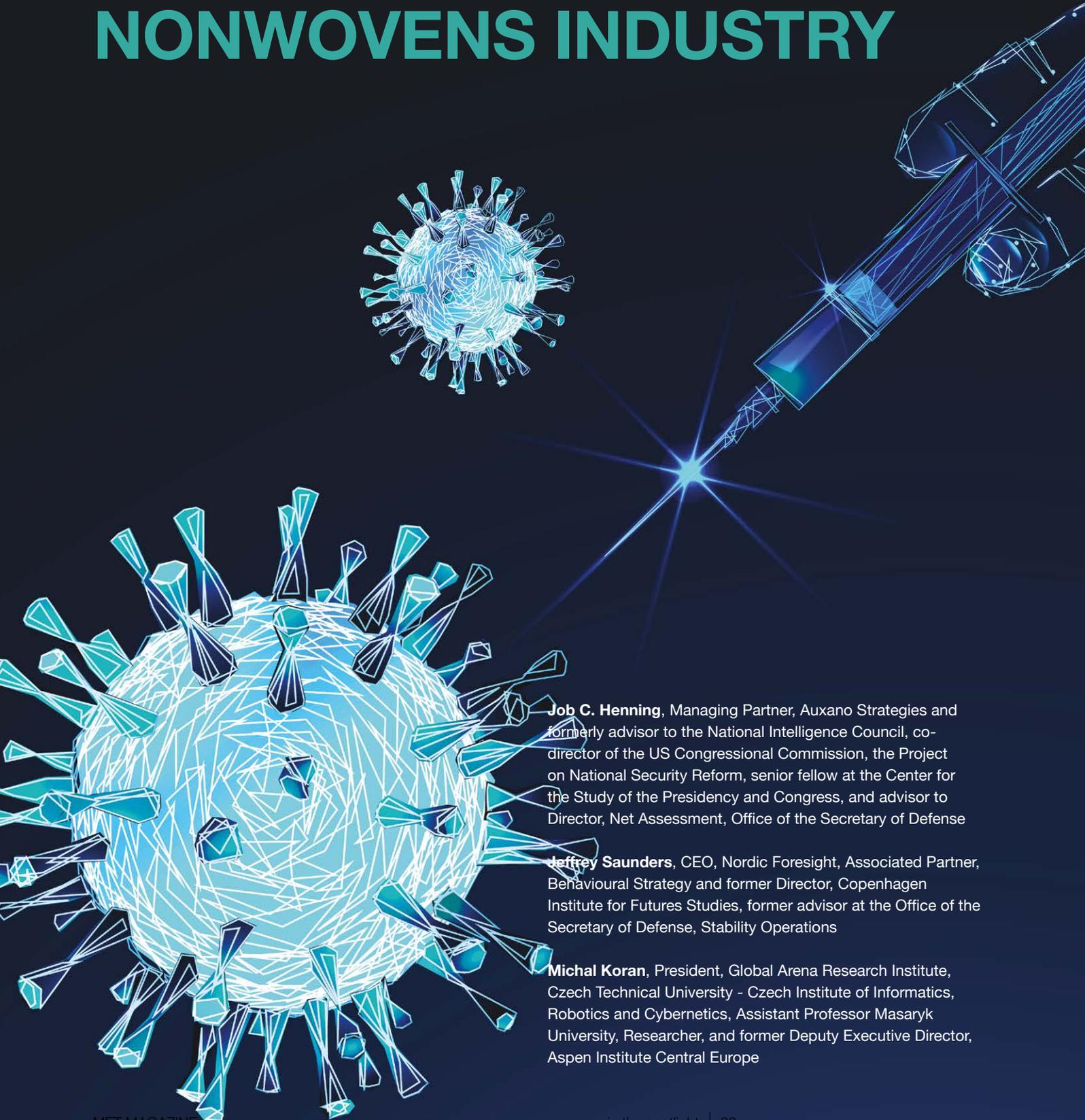
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The concept Tissue rewriter, E-WIND® T200 is the embodiment of the company's level of excellence attained throughout the years.

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IMAGINING A POST-COVID-19 WORLD: STRATEGIC FUTURES AND IMPLICATIONS FOR THE NONWOVENS INDUSTRY



Job C. Henning, Managing Partner, Auxano Strategies and formerly advisor to the National Intelligence Council, co-director of the US Congressional Commission, the Project on National Security Reform, senior fellow at the Center for the Study of the Presidency and Congress, and advisor to Director, Net Assessment, Office of the Secretary of Defense

Jeffrey Saunders, CEO, Nordic Foresight, Associated Partner, Behavioural Strategy and former Director, Copenhagen Institute for Futures Studies, former advisor at the Office of the Secretary of Defense, Stability Operations

Michal Koran, President, Global Arena Research Institute, Czech Technical University - Czech Institute of Informatics, Robotics and Cybernetics, Assistant Professor Masaryk University, Researcher, and former Deputy Executive Director, Aspen Institute Central Europe

Background

Government responses to the COVID-19 crisis continue to be volatile. Following a difficult spring of 2020, where governments sought immediate actions at virtually any cost to avoid a breakdown of healthcare systems. For much of 2020, core aspects of the disease itself remained unclear, which created anxiety. The disease also mutated and developed a new variant. Together, these uncertainties led to changing government policies and polarized political responses to isolation and reopening measures.

National responses have far-reaching political and fiscal implications with strategic dimensions. The global economy is experiencing the worst economic crash since the Great Depression. However, the true dimensions of the situation are partially obscured by the bifurcated ways different portions of the global populations are experiencing this crisis. White collar labor across industrialized and industrializing societies have been largely insulated from the turmoil, while large portions of blue-collar labor are experiencing radical disruption in earnings, savings, stability, and mobility. National budgets and the social safety net, the core element of the modern liberal state, are now under stress. Global debt increased by 20 trillion

USD since 2019 and now is expected to reach 277 trillion USD by the end of 2020. Developing nations seek financial assistance on levels not seen since the 2008 crisis, while the International Monetary Fund (IMF) has warned that financial institutions in the developed economy face liquidity crises.

Many call for a more multilateral approach to the crisis, but the geopolitical turmoil that wracked 2019 has continued. Few have articulated what a better multilateral approach should look like. Some warn about the threats to a globalized economy, 'decoupling' with China, the final demise of American hegemony, and an end to globalism. These are little more than ideological projections. Others make clarion calls for the emergence of a new order. As seductive as this Churchillian rhetoric may seem, such calls are unrealistic. They risk distracting us from the real options we face.

Imagining What You Can't Predict

While there is widespread agreement that the post-pandemic world is likely to look considerably different, there is not much agreement on how it will change. The high level of uncertainties around key aspects of the crisis currently makes it very hard to model and forecast its impact on the global

strategic environment.

Although we cannot predict it, we can imagine it. The following are six scenarios about what the world could look like over the next several years.

Six months have passed since the original publication of the scenarios. Several trends have become more pronounced in the meantime, and they continue to unfold within and across societies, making it all the more important to verbalize, discern and differentiate among the distinct trends, factors, and indicators. This will enable us to make a better sense of the overwhelming flurry of social, political and economic developments following the initial COVID19 outbreak. The scenarios are:

- Scenario #1: The Panic Normalized
- Scenario #2: Taming Our Worst Impulses
- Scenario #3: Too Little, Too Late
- Scenario #4: No Return To Normal
- Scenario #5: An Atomized World
- Scenario #6: A Disaster Forgotten

Scenarios can help us understand the potential social, political, and cultural implications of the COVID-19-crisis and how it could have longer-term effects on our institutions, norms, values, and morals.

KEY UNCERTAINTIES



The virus



Government Competition/International collaboration



International Trade



Commodity Volatility



Stimulus Spending



Sovereign Default



Depth & Duration of Economic Impact



Depth & Duration of impact on society

By making our assumptions more explicit, scenarios can also help us understand many of the strategic risks our actions are incurring while realistically looking for possible positive outcomes. By forming a common view of what could happen, we might be better prepared to know what to look for and how to interpret data when we see it, recognize patterns, and start making more effective and coordinated choices today.

Scenario 1: The Panic Normalized

ASSUMPTIONS: Cyclical virus, little international cooperation, spillover to international trade, volatile commodity prices

The virus has mutated and continued to reappear cyclically, leading to varying mortality rates among demographic cohorts and immunity levels among the recovered. The cutthroat, every-government-for-itself competition for medical resources spilled into the economy and trade. Instability poisoned nations' willingness to collaborate on the development and rollout of a vaccine. While the US and Germany pursued strong fiscal and monetary measures, other European and Asian countries 'free-rode' on the 'markets of last resort'. Countries accused each other of using the crisis to limit competition, protect local industries, and manipulate exchange rates. The US administration used the situation to confront and compete with China.

New non-tariff trade barriers in both countries exacerbated bilateral trade issues. The number of national security and health exemptions asserted by member nations to multilateral trade obligations under the World Trade Organization (WTO) mushroomed, fatally weakening the institution.

Instability led to further economic downturns, capital flights, and higher capital costs. Commodity prices experienced sustained levels of high volatility, and collapsed energy prices did not recover. Higher priced oil and gas producers were driven out of the market, returning the US economy to importer status and causing US military posture to reprioritize the Persian Gulf. The 'energy transition' to a global

decarbonized economy sputtered to a halt, definitively putting mid-century UN IPCC targets out of reach.

Extraordinary emergency stimulus deficit spending led to a fundamental renegotiation of the post-War liberal welfare state, austerity measures, and higher taxes. It set off a chain of sovereign debt haircuts and defaults in Eastern Europe, Russia, the Middle East, and Africa. All of this triggered decline in life expectancy in North America and Europe and the highest levels of social and labor unrest in decades.

“By making our assumptions more explicit, scenarios can also help us understand many of the strategic risks our actions are incurring”

In Latin America and East Asia, China and countries have experienced analogous epidemic crises, economic shocks, sovereign defaults, and austerity programs in prior decades. Having become more resilient as a result, they fared better. Additionally, China's combination of technology-enabled autocratic governance and socially more compliant political culture enabled it to manage the crisis very differently than other nations.

As the pandemic subsided, there was a protracted period of economic stagnation and sustained high levels of underemployment. Populist movements spread globally among those most impacted by drastic cuts to welfare programs. Disruptive actors² further weakened domestic social solidarity and destabilized international institutions.

There was a slow L-shaped recovery. It is not so much the 'end of globalization,' but the emergence of a more volatile, illiberal world order. The trend towards bilateral trade agreements accelerated. East Asia and Latin America have become more autonomous centers of power. Strong

regional actors have more prerogative in their spheres of influence. The new competitions are not about ideology, but governance capacity, competence, and liquidity.

Scenario 2: Taming Our Worst Impulses

ASSUMPTIONS: A higher level of international cooperation among developed nations, vaccine development, COVID-19 virus is brought under control in high-income countries

Following a period of panic in the first half of 2020 and acute but short-lived global economic collapse on par with the Great Depression, nations began to focus on taming their worst impulses. While there was no heroic leadership, bottom-up pressure from within industrialized societies manifested itself resoundingly in national legislatures, which compelled executive leadership to act.

Nations began developing a more coordinated response to boosting critical medical supplies and developing fast-tracked risk-tolerant approaches³ to antiviral medication and vaccine development. This limited the contagion's spread and mitigated the worst of the economic fallout. A new approach emerged that focused on monitoring and coordinating responses to outbreaks, standardization of statistical measurements and data sharing, reduced trade barriers on critical medical supplies, and coordination of monetary policies to ensure adequate liquidity.

Political and economic coordination curbed economic downturns and avoided a chain reaction of sovereign debt crises from spreading across the globe, enabling a V-shaped economic recovery in high-income countries with fewer lives lost. While travel among high-income countries was restored, these regions enacted long-term restrictions on travellers from less developed regions. Less developed countries struggled with lower levels of liquidity, increased cost of capital, and austerity measures.

The struggle with COVID-19 and associated effects became intractable

across much of Africa and parts of southeast Asia. Widespread disruptions to the complex global supply chains exposed vulnerabilities that started to seem increasingly intolerable to industrial nations, whose companies began to reshore production to local and regional production centers.

The resulting global economic dislocation benefited the 'core' of the global economy. Although manufacturing was 'reshored,' it did not create a large number of new jobs. It led to a new wave of 'South-North' leaders, ideologies, and parties in the 'periphery'. The biggest losers have been underdeveloped and developing countries.

Scenario 3: Too Little, Too Late

ASSUMPTIONS: Weaker and slower international cooperation, long term negative economic effects, return of corporatism, stultified attitudes and behavior

The divided European Council and the dysfunctional US Federal government were unable to lead a global effort alongside their G-20 counterparts. When G-20 leaders finally announced their coordinated pandemic responses, their actions were too little, too late.

The global economy collapsed, unemployment soared above 25%, and liquidity crunches roiled markets. Many countries struggled with limited access to liquidity, increased cost of capital, and austerity measures. Delayed responses led to devastating humanitarian crises in middle and low-income countries.

US global leadership waned, and China filled the vacuum. While ASEAN countries resist China's expanding influence, China's 'lender of last resort' status in Africa, Latin America, and Europe has grown. The industrialized countries navigated the worst of the disaster, only to witness a protracted U-shaped decline and recovery. Europe and North America currently face a more volatile post-pandemic world guided by weakened governments, institutions, and international influence.

Across western societies, people now prize security and a fixed income. That meant an effective end to the 'gig economy,' as hundreds of millions of people without adequate health insurance, savings, and retirement are permanently scarred by the economic collapse. The most coveted positions are once again either working for the government or at a major corporation, where one has job security and often

lifetime employment. The reduction in competition among firms led to higher levels of collusion among firms and stronger relations with the state. Undisciplined corporate investment and lower levels of R&D spending resulted in declining internal rates of return.

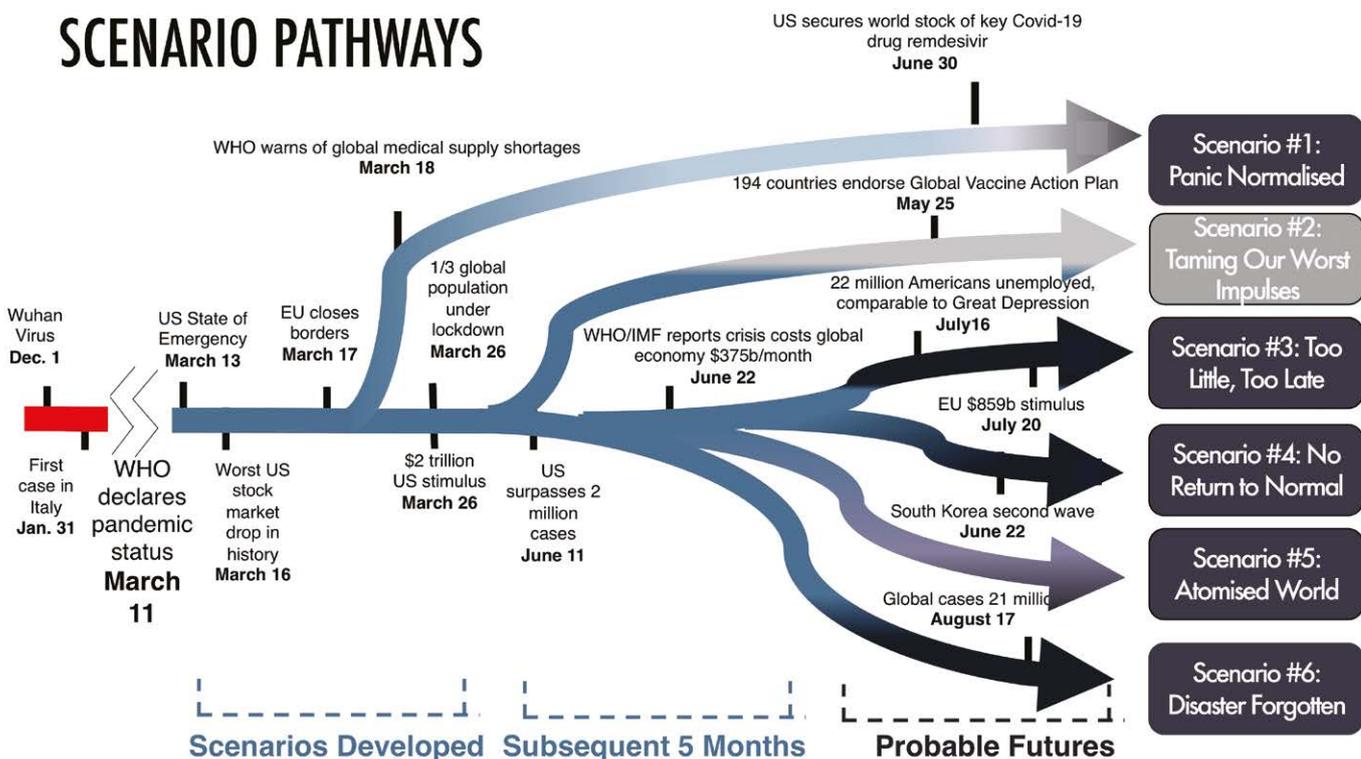
Large groups in democratic societies in Asia, North America, Latin America, and Europe became disillusioned with representative democracy, but no compelling alternatives have emerged. Democratic participation and civic life is at an all-time low. The world entered a long desultory period of slow growth, reduced innovation, and 'cultural retreat. There were no winners.

Scenario 4: "No Return to Normal"

ASSUMPTIONS: Isolation measures unsustainable, testing undeveloped, virus cyclical, effective steady state response, slower and more distributed economic growth, evolved attitudes and behavior

In the face of unsustainable economic and fiscal costs, countries were forced to lift isolation measures and reopen their economies quickly. This happened before antiviral treatments and antibody testing capacities were widely available. It quickly became apparent that the

SCENARIO PATHWAYS



global isolation efforts in the first half of 2020, and the massive costs associated with them, have pushed a 'hidden bow wave'⁴ of infections into the future. Despite massive investments in vaccine development, an effective, scalable vaccine was still years away. Worse still, antibodies do not provide sustained immunity from COVID-19. A significant portion of the global population has become reinfected. Mutations have caused the virus to become a cyclical disease. Countries episodically reinstated and then lifted isolation measures.

Western culture has fundamentally changed. People no longer want to shake hands with strangers and tend to avoid crowded public spaces. People who thought they could not wait to go back to work in office buildings have discovered, through periods of isolation and concentrated time with family, an interest in renegotiated work/life balance and demonstrate less willingness to sacrifice for corporate and material interests. The culture of consumer capitalism may have peaked.

Saudi Arabia and Russia's price war had the unintended side effect of making modernizing investment in their own petroleum industry infrastructure unsustainable. Oil prices never recovered. A combination of changed habits and attitudes and innovation unexpectedly led to far lower financial costs for the 'energy transition' than previously projected. The signatories of the Paris Agreement are now on track to meet mid-century UN IPCC goals.

As isolation measures came and went, it was not possible to return to business as usual. Business models evolved with a steady shift away from concentrated offices, business travel, and in-person meetings. There was an evolution of the 'gig economy' to a more durable form of economic activity. Corporations continued to be important, although they dramatically shrunk in size and their role shifted to become a coordinator of talent, a balance sheet, and guarantor for performance.

It has now become easier to offshore more knowledge work tasks. Knowledge workers now experience growing

competition from knowledge workers in middle and low income countries⁵. While causing wage stagnation and decline in industrialized economies, the developing world experiences sustained strong wage growth.

Scenario 5: An Atomised World

ASSUMPTIONS: Ineffective pandemic response, national competition prevails, declining public trust in government, legitimacy crisis as public seeks alternatives to institutions

The pandemic exacerbated economic, ideological and technological divisions within and among countries. The delayed and ineffective pandemic response in the United States, Europe, and Asia combined with an unabated competition for medical supplies and overwhelmed health care systems eroded social cohesion. The rich became richer because they had access to cheap capital that enabled them to buy distressed assets and benefit from rescue packages. The poor bore the brunt of the crisis through higher levels of unemployment, lower levels of social spending, deferred retirement, higher rates of early mortality, and high levels of consumer debt. Middle- and low-income countries suspended investment in energy, mobile data, education, and health care infrastructure, causing them to fall further behind high income countries as a result.

The great 'digital divide' deepened between elites and the rest and among regional powers who have effectively "balkanized" technology platforms. Societies became more "atomised", and citizens turned to emergent transnational communities, which created unpredictable economic and political spheres beyond the reach of many governments. This led to a period of episodically robust, but uneven innovation. It also led to increased digital crime, fraud and disinformation. These trends also led to renewed coordination among international labor movements that organize citizens on the wrong side of the 'digital divide'.

Western societal commitments to liberal values turned out to be shallower and

less durable than previously believed. While there was no cataclysmic descent, western democracies, middle eastern states, and authoritarian governments like China and Russia began to converge around technology and governance, and the expansion of pandemic surveillance authorities and capabilities to control populations, resulting in stronger states and weaker, more fragmented civil societies.

Tech giants were the only true winners from the crisis, with surging profits and little regulation.

Scenario 6: A Disaster Forgotten

ASSUMPTIONS: Isolation measures unsustainable, crisis fatigue, no effective steady state response, conservative retrenchment, no investment in resilience

After lifting unsustainable isolation measures, societies essentially threw up their hands, deciding the problems could not be solved without breaking their economies. Some saw it as a vindication that the dangers of the crisis had always been exaggerated or presented out of context. The ongoing effects of COVID-19 become another element of annual death statistics.

As audiences became exhausted with coverage of hospital emergency rooms, the press shifted narratives to financial markets, the economy and upcoming elections. Countries have been left with gaping holes in public sector finances, with unsustainable debt levels and much less ability to respond to future economic downturns. The 'Baby-boomer' generation retired later and experienced higher death rates. Gen Z was deeply seared by the pandemic experience, its first defining moment.

A new generation of political leaders in the United States and Europe came to power around a fiscally conservative consensus dedicated to economic growth and balanced budgets. Popular movements associated with figures like Bernie Sanders have been deflated as the extraordinary level of stimulus spending made large government initiatives no longer seem revolutionary and created a new disillusionment

with ‘big government spending’. New social programs now compete with other budget outlays under a period of austerity and skepticism. Paying down the interest and principal have had the effect of sharply reducing discretionary spending in any event.

Western societies feel hypocritical in their initial concern over the suffering of the pandemic, superficial in their embrace of social justice, and far less resilient than they believed themselves to be. However, preparations for future pandemic responses have been swept under the rug. Little was learned.

Sensemaking

One of the dominant themes in the scenarios is that the experience of this crisis is not going to be a quick ride, even with the introduction of the vaccine. It will take many months to inoculate the populations of high-income countries. If vaccine nationalism takes hold⁶, poorer countries will have limited vaccine access for its populations well into 2024⁷.

Governments need to do more to prepare populations for what to expect and begin to introduce gradual policies and long-term plans for a world that does not return to normal any time soon. Governments need to develop ways to do this in financial and socially sustainable ways. It will be hard or impossible to maintain a ‘war footing’ vis a vis this crisis. The disaster is not visible to everyone and most people do not directly feel its effects or agree on its importance.

The crisis has created a significant number of conditions that favor larger, more powerful governments and corporations, as well as more coordinated activity among them. Businesses with larger balance sheets and more influence with governments are far less likely to be terminally damaged by the crisis.

The crisis could have sustained effects on the global economy’s ‘Periphery’ as previously cheaper manufacturing locations lose contract manufacturing, reinforcing reshoring trends⁸ of manufacturing moving back to advanced markets due to AI and automation. Where China fits into the

‘Core’ vs. ‘Periphery’ of the global economy in this regard will influence how the crisis affects the Chinese economy and society.

Technology’s role in the post-crisis society is less certain than first impressions might suggest. While it could be embedded in society in ways that make distance learning and remote work commonplace in our economies, it also could feed on-going trends that make big tech and governments gather more information on individuals. Some of this is no doubt necessary. Some of it will challenge western notions of privacy and freedom unless populations demand accountability and protection of their freedoms, state leaders fight to maintain transparency, and their citizens’ rights to privacy and confidentiality.

Implications for The Nonwovens Industry

The COVID-19 pandemic has and will continue to have mixed implications for the nonwovens industries. On the positive side, demand for Personal Protective Equipment (PPE) and disinfectant wipes for medical personnel and ordinary citizens have surged across the globe (by as much as 12% in the United States) as mask mandates and recommendations became commonplace. Nonwovens producers have benefited from relaxation of restrictions on single-use items – much to the chagrin of environmental campaigners⁹.

On the negative side, the pandemic has catalyzed short-term and long-term transitions that will have significant implications for nonwoven producers in personal care and in the construction industries. When the COVID-19 crisis first became apparent in February and March 2020, many assumed that the lockdowns would lead to a baby boom in many high-income markets as couples would have more time to recreate and procreate. It now appears that the economic uncertainty surrounding the pandemic has had a more powerful effect on people’s reproductive choices. Researchers in the United States¹⁰ and Europe¹¹ now expect that the number of babies born could decline by as much as a third, leading to 300,000 fewer births in the

United States. These projections are corroborated by the decline in Google search terms for pregnancy tests and for information about morning sickness and ultrasounds. This decline will have a significant impact on demand for diapers, baby wipes, baby food¹⁰, etc.

Some producers have shifted towards the production of premium-based products for targeting wealthier parents, whose reproduction plans are not easily derailed by economic uncertainty.

The consequences of the baby bust on nonwovens producers will last at least three years as this smaller cohort progresses through diaper dependence to toilet trained.

The length of the baby bust is dependent on how long economic uncertainty lasts, but it does not represent a structural change. The COVID-19 pandemic has wrought a structural change in how organizations plan for and will utilize commercial real estate¹² as retail shifts towards an e-commerce model and as companies implement work from home and work near home operating models. This structural change has already had fundamental impacts on the commercial real estate industry and construction industries as well as the nonwoven producers that support them. The world’s largest real estate company, JLL¹³, has reported that “direct commercial real estate investment fell 29 percent globally to \$321 billion in

“Some producers have shifted towards the production of premium-based products for targeting wealthier parents, whose reproduction plans are not easily derailed by economic uncertainty.”

the first six months of 2020 compared to the year-earlier period". And many in the industry expect that urban areas will have a surplus of building stock for much of the next decade¹³. The decline in commercial real estate will have cascading effects on producers of nonwovens for carpeting, furniture, rugs, and other related industries.

Conclusion

The Roosevelt administration did not recognize the impending invasion of Pearl Harbor, nor could the Bush administration recognize the rise of al Qaeda, even though both had access to the relevant data. Similar problems underlie many failures in the corporate world¹⁴, as companies failed to recognize how a competitive

environment was changing around them. Pattern recognition can help decision makers and societies avoid future catastrophes.

The post-COVID-19 world will be the start of a new epoch, and these scenarios are illustrative about what the world could look like over the next several years, vignettes that suggest key contours. The patterns they present can help decision makers and societies avoid future catastrophes. Ideally, they serve as a prelude to a larger, rigorous phased multinational effort with multi-domain expertise.

We will face challenging moments that suddenly change the course of the global crisis. By pointing us towards

certain kinds of data and mentally preparing us for possible ways the future could unfold, we can gain a better understanding of specific risks we are assuming, as well as become better prepared to recognize pivot points. This will help us collectively act in ways that maximize the odds of desirable outcomes and increase our ability to manage risk and operate in an environment with very imperfect knowledge.

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THE COVID-19 CRISIS AND ITS IMPACT ON THE DISPOSABLE HYGIENE INDUSTRY

Despite global containment measures, COVID-19 has grown into a full-blown pandemic. At the time of writing, over 7.4 million people worldwide are suffering from SARS-CoV-2. The death toll exceeds 800,000. Of the over 23.424 million cases registered since December 1, 2019, more than 15 million have recovered¹.

One of the most impactful factors is indeed the age composition of the population. Although COVID-19 affects people of all ages, the elderly are much more at risk, especially those with chronic medical conditions. About 90% of people in the hospital with COVID-19 had at least one underlying health condition².

COVID-19 strikes men harder than women³. Data coming from China and Italy lead to this conclusion, albeit it's been debated whether this might be due to the gender disparity. Both genetical and behavioural factors could be at play here.

In order to protect public health, several countries have decided to step up their safety measures through country-wide lockdowns, enforcing work-from-home and stay-at-home orders as a mass quarantine measure, and allowing only essential businesses to remain open.

This strategy, also known as “flattening the curve”, has mitigated the spread, keeping the health care system from working at overcapacity. As a consequence, multinational tech giants have thrived, while most businesses have suffered, especially those relevant to travels, leisure and fun. Enterprises in consumer goods as well as disposable hygiene have gained during the lockdown, but now they're slowly coming back to pre-pandemic levels.

COVID-19: the impact on the global economy

The impact of COVID-19 on the global economy is profound. By Deloitte's estimates⁴, it will bring massive disruption to production, supply chain, and market all over the world, also undermining financial markets

and firms. It could take three years for the US economy to recover from COVID-19⁵. China might be in better shape, as it has successfully flattened the curve and has started lifting restrictions. The Eurozone, on the other hand, is among the worst hit regions in the world and will likely contract 7.2% in 2020, with significant downside risk. India's real GDP will grow by just 2.0% in 2020. The Japanese economy is going to contract by 5.5% in 2020 and is expected to recover by 2.8% in 2021⁶. As regards Latin America and the Caribbean, the International Monetary Fund expects a contraction of 9.3% in 2020, projecting a partial recovery in the region of 3.7% in 2021⁷. In June, Brazil posted a record budget deficit of 37.6 billion USD⁸.

The first effect of the pandemic is more people seeking work. Unemployment rates have increased worldwide. According to the IMF, the proportion of people out of work has hit up to 10.4% in the US⁹. Figures go up to 29% in Italy and 41% in France. The IMF expects global GDP to shrink by 4.9% in 2020¹⁰.



To keep the economy afloat, all central banks around the world have gone through a printing spree, acquiring assets at unprecedented levels and distributing stimulus packages worth trillions of dollars.

All things considered, the so-called Great Lockdown looks in many ways alike to previous economic meltdowns. Yet, however similar, it is by all means one of a kind - a Black Swan event through and through.

The impact on the Disposable Hygiene industry value chain

The corona crisis has generated a boom in the face mask market. With the World Health Organization advising anyone to wear them in public places¹¹, the demand for raw materials that are necessary to produce them has skyrocketed. As a consequence, the price of meltdown fabrics, most of which coming from China, has ballooned¹², while availability remains limited.

As the novel coronavirus spread through North America and Europe, nonwoven demand in selective markets increased significantly. At the end of 2019, the industry was already working at full capacity. Right now, new investments have been announced in order to match the untapped demand. In fact, Europe and the US have suddenly room for growth, as China can no longer take care of the world's supply of meltblown material.

As a matter of fact, prior to COVID-19 China dominated the face mask sector with a 85% market share¹³ thanks to its manufacturing cost advantage and access to lower prices for raw materials. In 2018, China was the largest exporter of meltblown nonwovens in the world. The US was the largest importer. At the moment, China has restricted or prohibited exports of meltblown, SMS/SB and spunlaced nonwovens to supply in-country needs for converted hygiene, wipe and medical products. This has determined a global shortage of meltblown and spunbond nonwovens and, simultaneously, an expansion of the production capacity of meltblown everywhere.

A shakeup this big had substantial implications on the population. For starters, it triggered a sudden change in consumer habits. As soon as COVID-19 started spreading in Europe, panic buying became a thing. Driven by fears of potential shortages, consumers began stockpiling. As a consequence, the concern about a supply chain paralysis turned into a self-fulfilling prophecy - a tragedy of the common that aggravated the crisis in logistics while leading to record sales for manufacturers of disposable hygiene products. Compulsive hoarding, though, was not the only repercussion.

Another exceptional side-effect of the lockdown economy has been the explosive growth of online channels. According to market research Rakuten Intelligence, e-commerce in the US is up 30% year-on-year from the beginning of March through mid-April 2020, a level which was not forecast until 3 years from now. Both established brands and private label manufacturers are registering spikes of up to 50% from online sales.

Stockpiling and e-commerce have been the key drivers in the Disposable Hygiene industry, allowing to its main players to gain considerable revenues and profits in Q1 2020¹⁴.

GDM: providing shelter against any storm

With the stress companies are being put under by the COVID-19 pandemic, there is a global call to rethink and rebuild business strategies from the ground up. A far-reaching overhaul is taking place, reshaping the global economy head to toe. Society as a whole, from startups to public institutions and multinational enterprises, is forced to redefine its

processes. The future has never been so digital.

Since the advent of the Internet of Things, GDM has in fact undergone a deep reorganization of its digital strategy: its multifaceted offer includes smart services and products, connected machines, edge analytics services, an innovative service platform, plus a state-of-the-art digital toolkit. Because of this, and also thanks to its network, its decades-long experience in the field, and, most importantly, its founding principle "Business Made Easy", GDM is a reliable partner for any customers and business in the Disposable Hygiene industry.

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Looking for a digital partner in the Disposable Hygiene industry that you can trust?

Contact us at info.it@gdm-spa.it and stay up to date by following our LinkedIn account GDM Spa!



TURNING PRIVATE
LABELS INTO
**POWERHOUSE
BRANDS**

Steven Begley, *partner in McKinsey's New Jersey office*
Angus McQuat, *associate partner in the Toronto office*

Consumers have recently been snapping up private-label goods at grocery and mass retailers. Will this trend last? Only if retailers develop a compelling private-label strategy and operating model.



Private labels, or store brands, are having a moment. Early in the COVID-19 crisis, many consumer-packaged-goods (CPG) brands disappeared from store shelves due to panic buying and pantry loading. Some shoppers, not finding their preferred brands, instead bought private-label goods—and have continued to do so. The fact that private labels are frequently cheaper than national brands has helped, too, as financially strained consumers tighten their purse strings. These two advantages—high availability and low price—have made private-label products considerably more appealing to consumers during the COVID-19 pandemic.

The consumer shift toward private labels benefits retailers as well, since private labels are typically more profitable for them. Furthermore, high-quality private labels can gain a devoted following and become a powerful driver of customer loyalty to the retailer.

But will this private-label boom be a short-lived one? In the near term, are retailers at risk of disappointing first-time buyers of private-label products with a poorly-thought-out offering? And once the COVID-19 crisis abates, will most consumers abandon store brands and go back to buying their preferred brands? In our view, if retailers don't step up their private-label game, the answer to each of these questions will almost certainly be "yes."

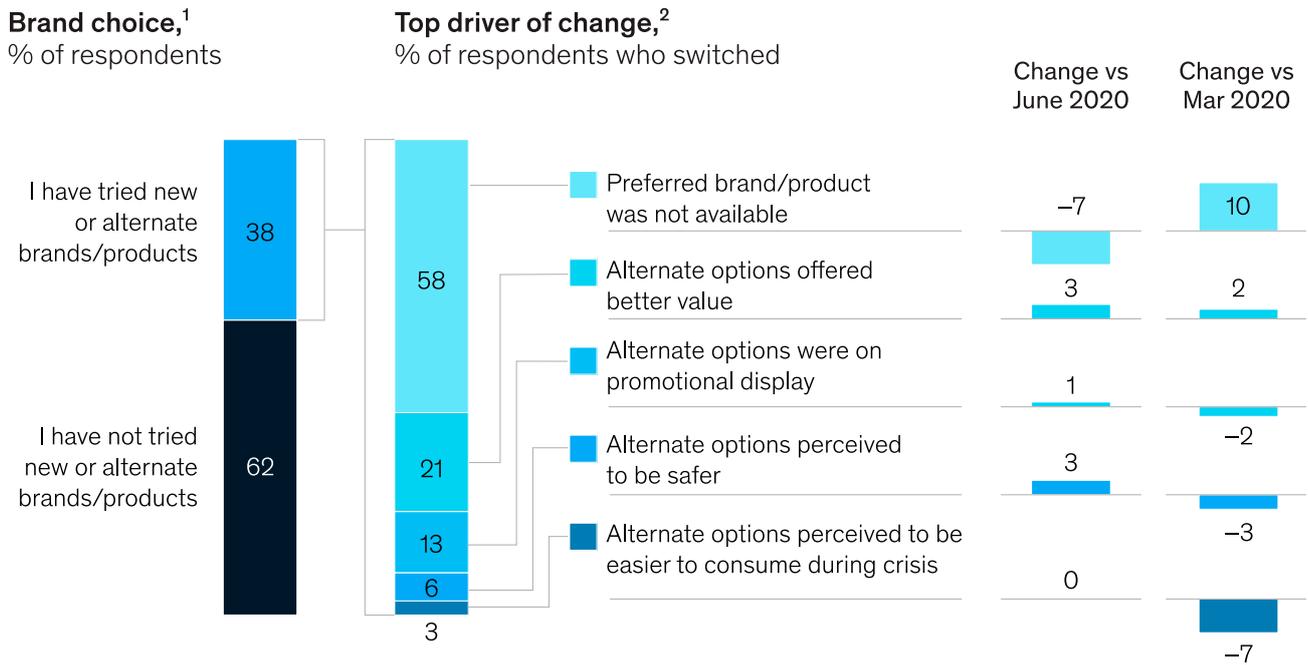
A shift in buying behavior

During the pandemic, consumers have proved quite willing to change their buying behavior. Our consumer surveys show that nearly 40 percent of US consumers have tried new products or brands since the onset of the COVID-19 outbreak. Much of the switching behavior was because of availability issues—some branded products were out of stock for weeks as CPG manufacturers struggled to meet sudden spikes in demand (Exhibit 1).

Exhibit 1

Nearly 40 percent of consumers have tried new products or brands during the COVID-19 crisis.

Consumer brand choice during COVID-19 crisis, Sept 2020 results



40% of respondents who switched brands will likely continue purchasing the new brand after the COVID-19 crisis (up from 12% in Mar 2020)³

Note: Figures may not sum to 100%, because of rounding.

¹Question: Have you tried new or alternate brands/products during the current COVID-19 crisis that you do not usually purchase?

²Question: Why did you switch from the brands/products you usually purchase to new/alternate options?

³Question: After the COVID-19 crisis is over and the situation returns to normal, do you plan to switch back to the brands/products you usually purchased?

Source: McKinsey COVID-19 US Grocery Consumer Survey, conducted Mar 19–22, 2020 (n = 1,502), June 15–20, 2020 (n = 1,981), and Sept 14–16, 2020 (n = 2,010)

McKinsey & Company

Private labels have been one beneficiary of this switching trend. In a mid-September survey of more than 2,000 US grocery shoppers, nearly one in five said they've bought more private-label products during the COVID-19 crisis than they did precrisis. Company leaders at North American grocers and mass retailers tell us that they have indeed seen heightened demand for private-label goods. When we asked consumers why they switched to private labels, more than 45 percent said price was the primary reason. That said, the second-most-cited reason was lack of availability of their preferred national brands (Exhibit 2).

Amid prolonged economic uncertainty, consumers' hunt for greater affordability

might keep the private-label boom going for a while longer. But other signs point to the shift being temporary. Consumers could very well choose to switch back to national brands postcrisis, especially because many retailers' private-label strategies and offerings aren't explicitly designed to capture long-term customer loyalty. Retailers can change that. And they should do so—fast.

Private labels as a way to win customer loyalty

Even as retailers have introduced new private-label products and brands over the years, few have thought through the role of private labels in their businesses. Some private-label brands and products come into being

simply because, for instance, a vendor offers to make a product at a lower cost and higher margin rate than a national brand. The retailer agrees—but doesn't carefully define this new product's value proposition or the product's role in the assortment. Some retailers have been somewhat more deliberate in launching private labels: setting targets for margin and penetration rates, adjusting those targets as needed, and even making changes in their organizational structures to put more focus on private labels. But they haven't aligned on their aspirations or developed a robust strategy for these brands.

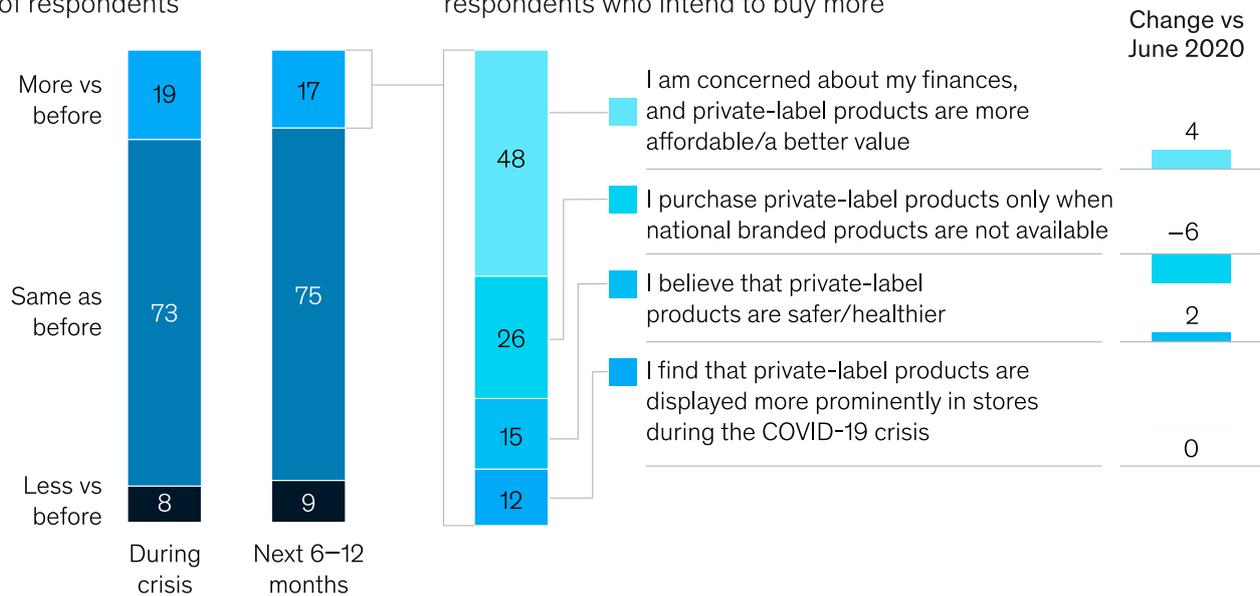
Exhibit 2

Almost 20 percent of consumers are buying more private-label products; the primary reason is affordability.

Consumer purchase intent during COVID-19 crisis, Sept 2020 results

Intend to buy private labels,¹
% of respondents

Top driver of change,² % of
respondents who intend to buy more



Note: Figures may not sum to 100%, because of rounding.

¹Question: How many more private-/store-label products are you buying now (during the COVID-19 crisis vs before)?

²Question: How many more private-/store-label products will you buy in the next 6–12 months when the situation is back to normal vs before the COVID-19 crisis? What is driving the increase in private-label product purchase?

Source: McKinsey COVID-19 US Grocery Consumer Survey, conducted June 15–20, 2020 (n = 1,981), and Sept 14–16, 2020 (n = 2,010)

McKinsey & Company

Retailers that seize this moment to reset their private-label strategies can translate short-term switching behavior into long-term customer loyalty. For some retailers, the private-label offering may have been successful in the pre-COVID-19 environment but now requires reevaluation. For retailers that haven't meaningfully invested in private-label capabilities, making bold moves is even more urgent.

Refine and pressure test your aspirations for private labels

Now is an opportune time for a retailer to define—or redefine—its aspirations for its store brands, based in part on the maturity stage of private labels in the markets in which it operates (see sidebar, “How private labels have evolved around the world”). Key areas in which to set aspirations and associated targets include brand awareness, customer perceptions, penetration, quality, value, profitability,

and private labels as a driver of store loyalty. The next step would be a high-level assessment—for instance, through customer surveys, competitor scans, and financial analyses—to understand the gaps between current performance and aspiration.

Conduct a detailed diagnosis and gap assessment

Once a retailer has done a high-level assessment, it can then take a deeper look at five areas—namely, brand strategy, assortment and pricing, marketing and packaging, product design and sourcing, and organization and operating model—and develop an action plan in each.

Brand strategy

Research often reveals that consumers recognize private-label goods as lower-priced products but not as products that deliver on quality, innovation, or excitement. Furthermore, consumer perception of a private label can

differ markedly across categories or departments: at some retailers, private-label diapers, say, are more expensive than the national brands whereas private-label soda is 20 percent cheaper than the national brands. Surveys have shown that even a retailer's own merchandising and brand teams sometimes have a poor understanding of each brand's value proposition and apply it inconsistently.

Retailers that seize this moment to reset their private-label strategies can translate short-term switching behavior into long-term customer loyalty.

Whether a retailer has chosen a “monobrand” strategy or maintains several private labels that cross price

tiers and categories, it should clearly define for each brand (and sub-brand) a customer value proposition that meets a distinctive consumer need. This step may seem obvious and basic but is often overlooked. The retailer could then test the value proposition with consumers.

Equally important is the development of clear standards and guardrails. By communicating and reinforcing these guardrails, the retailer can equip its brand and category teams to bring the value proposition to life consistently at each customer touchpoint.

Answering the following questions can be instructive as retailers develop and refine their private-label strategies:

- What are each brand's target customer segments—and what are their relevant wants and needs?
- What is each brand's value proposition, and what distinct consumer need does it meet? Is the value proposition differentiated from that of national brands?
- In which categories can our private brands play, and how can they win?
- What guardrails and guidelines have we set to help teams execute on brand value propositions? How can we ensure that all stakeholders understand these guardrails?
- How are we monitoring compliance with these guardrails across categories with regard to price positioning, quality, innovation, and other critical dimensions?

Assortment and pricing

Historically, retailers haven't heavily marketed their private labels. Customers' impressions of many private labels are influenced largely by what they see on store shelves—and there, many retailers fail to make much of an impression. The proliferation of national-brand SKUs, along with the introduction of secondary and tertiary brands to fill white spaces, eventually waters down private labels' differentiation and renders the assortment architecture irrelevant. Missed opportunities in pack sizes, flavors, and other subsegments pile up when a retailer doesn't have a systematic process for refining the assortment architecture.

Setting and regularly enforcing price-gapping measures is particularly important for private labels, many of which attract consumers precisely because of perceived value. Ideally, retailers would systematically compare the price of each private-label SKU against internal and competitor benchmarks. Here, too, compliance with established guardrails becomes lax over time, national-brand promotions weaken the private-label value story, and—perhaps most egregiously—brands play at very different price tiers across categories, without clear messaging to support these disparities.

As they seek to address misaligned assortment and pricing, retailers could start with the largest categories, then launch a longer-term program to revisit the entire assortment. They would do well to consider the following questions:

- What is our process for rationalizing SKUs, especially when value propositions overlap? What low-share SKUs in our assortment might be negatively affecting our private label's value?
- What is our process for regularly identifying and addressing white-space opportunities (such as flavors and pack sizes) within the category?
- For each of our private-label products, what is the “reference” national brand for price and quality benchmarking? Is it the market leader, or a product that resonates most strongly with our customers?
- What are our price-gapping rules, and how regularly are we adjusting prices for promotions or competitor price changes?
- How can we ensure that we are consistently maintaining price positions across categories within brands, even when we run promotions?

Communication, marketing, and packaging

Although private labels have traditionally relied on price and shelf placement to drive purchase, leading retailers have recently been using cost-effective channels to communicate the story behind their store brands—for instance, how they source ingredients or where the products are made. In particular, sophisticated retailers are looking at the key drivers of purchase at

a category level and ensuring fair-share presence. For example, one retailer is blogging about its private-label baby products on popular parenting websites and forums; another is seeking quality certification from the leading independent product-testing authorities. These and other actions help close the quality-perception gap that many private labels face.

Packaging, too, is becoming more important for conveying private labels' value proposition. In the past, private-label packaging tended to resemble the look and feel of national-brand equivalents. Leading retailers are now developing brand language on their packaging that not only draws shoppers' attention but also conveys the functional benefits of the brand. A leading private-label player in the value segment has added a prominent callout on its packaging announcing its clean ingredients, differentiating it from other value national brands.

Retailers ought to consider the following questions regarding communications, marketing, and packaging of private-label products:

- How are we making consumers aware of our quality parity (or advantages) versus the competition?
- In each category, what are consumers' primary sources of information and purchase drivers—and are we investing in those channels?
- How can we leverage our own channels (for example, point of purchase, store flyers, own website) to market our private labels?
- What, if anything, can we change in our packaging so that it is on par with the look and feel of the leading national and private brands?
- How can we design our packaging to convey quality and benefits (origin of ingredients, for instance)?

Leading retailers are now developing brand language on their packaging that not only draws shoppers' attention but also conveys the functional benefits of the brand.

Product design and sourcing

A retailer's private-label strategy—especially its choice of either focusing on me-too national-brand equivalency or introducing new features and benefits to a category—will, of course, greatly influence design and sourcing. Regardless of strategy, however, retailers would be wise to develop a mix of top-down product-design guardrails dictated by brand value propositions, and bottom-up category-driven priorities identified by the merchants who are typically closest to consumer needs and vendor opportunities.

In sourcing, a common misstep is to use a “price back” approach, whereby merchants set a price and margin target for the sourcing team. This approach typically leaves money on the table and reduces flexibility as market prices change. Because the approach focuses too greatly on margin percentage rates, the penny profit that a private-label product delivers may fall below that of a nationally branded product (especially when trade allowances are accounted for), making the consumer switch to the private-label product a losing proposition for the retailer.

Best-practice retailers have a clear, consumer-driven set of specifications and quality standards governing their private-label design and sourcing decisions—but, critically, they also have a mindset and key-performance-indicator (KPI) framework to drive toward lowest cost. Done right, sourcing excellence can often fund growth investments in the private-label program. Retailers could identify which product categories have the most attractive opportunities to improve penny profit and quality, and then develop new, savings-focused KPIs.

Retailers could also look into opportunities for innovation and differentiation in sourcing. As consumers become increasingly comfortable with buying private labels, retailers can more assertively introduce new products with features and benefits that surpass those of traditional CPG brands. Some private labels could even lead entire categories. After all, retailers have the advantage of a wealth of consumer insights; they see trends across brands, and therefore

are privy to customer patterns and preferences that may not be visible to individual CPG manufacturers. Many retailers that exclusively or primarily carry private-label products have built fierce customer loyalty by becoming trendsetters, with their private labels providing a “halo” to their retail banner.

In their journey toward excellence in product design and sourcing, retailers could think about the following questions:

- What is our process and framework for aligning on design priorities? Does it allow for sufficient input from category teams?
- What guardrails have we set for design and quality requirements by category type?
- How can we speed up the product-design process so that it's agile enough to respond to trends and product opportunities?
- What are the sourcing team's KPIs? Are they oriented toward best total cost, and does the team revisit cost at least annually to make improvements?
- How should we track private-label product profitability versus the national brand at the penny level (rather than the margin-rate level) to ensure that consumer switching to lower-priced private-label goods is net profitable?
- In what categories is our private label mature enough for us to “get ahead” of CPG manufacturers by introducing innovative or differentiated product?

Organization and operating model

There's no one-size-fits-all model to support private labels. Retailers rely on a variety of operating models, ranging from highly centralized organizations with dedicated resources (typically including brand management, product design, sourcing, quality assurance, marketing, and consumer insights) to decentralized operating models in which merchandising teams own much of the strategy and execution.

Centralized teams are most critical in the early stages of private-label development, during which merchandising teams need intensive support and expertise to identify opportunities and execute the value

proposition consistently. Centralized resources also play a crucial role in highly developed private-label markets where CPG-like functions manage differentiated brand standards and innovation pipelines. On the other hand, in markets with more modestly developed private labels, where the focus is typically on price differentiation and me-too offerings, we've found that it's most effective for a lean, centralized team to develop price and quality guardrails while category teams take the lead on execution.

At a minimum, a centralized sourcing and quality-assurance team would be best positioned to define specifications for newly designed product, select vendors, and make the optimal trade-offs between cost and quality. Leading retailers are also adding some level of brand stewardship to central teams to ensure consistency in execution across categories.

To figure out its optimal organizational structure or operating model, a retailer could consider the following questions:

- What steps can we take to clarify roles, responsibilities, and decision rights in every part of our private-label value chain?
- What is the role of the centralized private-label team and is it commensurate with the needs of the brand? How can we further clarify guardrails and standards to better enable category teams?
- As our brands grow, what is the optimal level of brand stewardship at the center to ensure that each brand's customer value proposition retains its integrity and is executed consistently?

The surge in private-label sales has been good news for retailers. Will consumers stick with private labels post pandemic? The answer isn't crystal clear yet—but retailers can certainly influence the outcome. For those retailers that set bold aspirations and move quickly to fill any capability gaps, private labels can soon become powerhouse brands.

HOW PRIVATE LABELS HAVE EVOLVED AROUND THE WORLD

Leading retailers worldwide have shown that a robust private-label offering can be a core pillar of a store’s value proposition. Store brands are typically first introduced as a vehicle for enhancing a retailer’s profit margins. They require lower marketing spend and overhead because they rely on store traffic and shelf position to secure sales. The products tend to be either at the opening price point and significantly cheaper than national brands (with certain quality or feature trade-offs), or me-too versions of leading national brands at lower price points. In the least mature private-label markets, the target consumer segments are people on a tight budget looking for basic options, as well as savvy shoppers who relish the idea of buying national-brand equivalents for less money. In these markets, private labels help drive retailer margin

and contribute to the overall price perception of the store—but they don’t enhance loyalty to the store, especially if their quality is noticeably inferior to that of the national brand. As the exhibit shows, most markets have evolved from this initial position. Particularly in European countries and Canada, many retailers have become sophisticated owners of private labels, managing their private labels much like consumer-packaged-goods manufacturers do—with strict discipline around the unique value proposition of their brands and with clear standards and guardrails. In these markets, private labels frequently launch innovative products or provide elevated quality and features versus the national brands, telling a “more for the same price” value story. As this evolution has occurred, private labels have become a strong driver of store loyalty.

Markets for private-label products are at different stages of maturity.

Private-label maturity

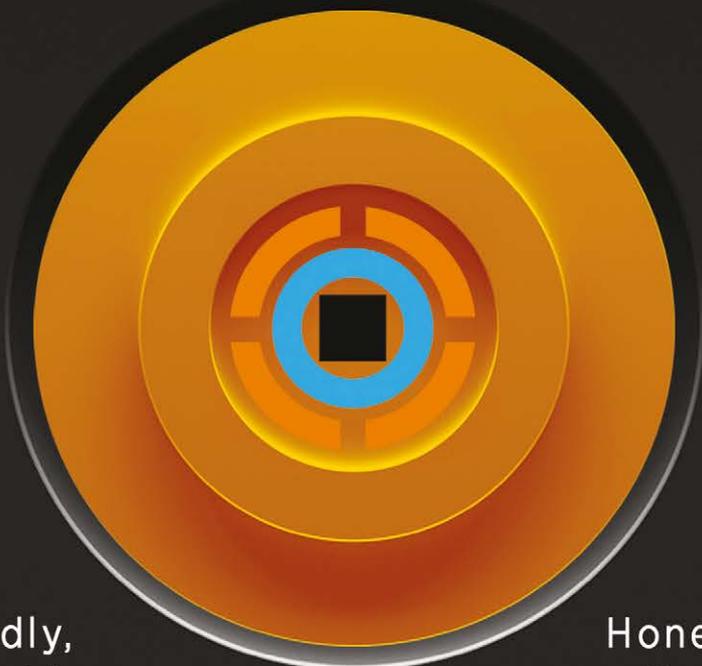


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VISION

Winding and unwinding
perfect reels with
maximum efficiency



MISSION

Create user friendly,
innovative and highly
customizable winding
and unwinding systems:
expanding shafts,
chucks, safety chucks
and handling systems

VALUES

Honesty and integrity
Constant work for
customer satisfaction
Respect and recognition
of people's value

MOD. 640 PQL POPE

Pneumatic expanding
shaft with ledges
for non-stop machines



MOD. 714 MZ-L

Pneumehanical
chuck with leaves



MOD. 200

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shaft puller



MOD. 700

Tilting table



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Curt G. Joa, Inc. has been inventing automation solutions for the hygiene industry since 1932. Regardless of economic cycle, automation provides an investment return as measured by increased production through-put, reduction of labor, increased uptime and reduced maintenance expenses, and improved quality with positive market response.

JOA approaches every project with the same engineering discipline rooted in the TRIZ methodology, or the theory of inventive problem solving. Technology does not substitute knowledge, and therefore every project relies on the logic, data and research for problem formulation, system analysis, failure analysis, and patterns of system evolution. The approach gives customers the optimal solution they need for their specific goals.

Diversified machine platforms

The JOA® machine platforms support the production of hygiene, medical PPE and other disposable products. Specifically, the adult platform comprises pant, brief and light incontinence products; and the baby platform provides options for both pant and diaper/nappie. The many feminine care production machine options reflect the extensive variety of the market.

1. The baby diaper platform, the J8T-B, has the production speed of 1200 ppm and features the patented No Scrap Ear (NoSE™) System. The unique NoSE™ process utilizes ergonomically or symmetrically shaped ears from a continuous web with no waste. The JOA® NoSE™ System allows for different leading and trailing angles and shaped cuts. As the smaller version of the adult, the baby platform also includes the patented Gentle Touch™ Folder, which maintains the visual appeal and absorbent functionality of the diaper core.
2. The baby pant platform, the J71-BP, has production speeds of 1000 ppm and features proprietary technologies, including turret unwinds that automatically splice raw materials at-speed during production. In addition, our insert attachment process applies adhesive up to the cut edge,

eliminating the need for a cover strip. Also available is the patented Single Transfer Insert Placement Process (STIPP™), allowing for multiple pitch lengths without changing the entire unit. In addition, cross directional placement control is offered as well, which reduces downtime during size change by easily shifting the unit's centerline.

3. The adult pant platform is comprised of the J8T-AP and J71-AP, with production speeds of 500 ppm and 300 ppm, respectively. Both machine options can include stretch film lamination, with the flexibility to switch between stretch film and strands in minutes. The unique Auto Re-feed Feature maximizes material efficiency and reduces machine stops due to material damage. Finally, the Single Transfer Insert Placement Process (STIPP™) is available with the same benefits of multiple pitch lengths and cross directional placement control.
4. The adult brief platform, the J8T-AB, has a production speed of 450 ppm and the inventive Gentle Touch™ Folder which prevents cores from cracking while increasing the maximum machine speed. The tandem folding process results in bi-fold, tri-fold and quad-folded brief products.
5. The light incontinence platform includes the J20S-LI and DEDE330, with production speeds of 1500 ppm and 800 ppm, respectively. A variety of production capabilities are available for cores, materials, and ADLs. In addition, the platform includes multiple processes for different fold and wrap options, including overwrap or pouch. Also available is the Flexographic Printing Unit with three-color printing of specific patterns in the ADL or topsheet.
6. The variety of feminine care production is reflected by the variety of JOA® production solutions offered from the platform. Both the J20S-PL and J20S-FN, with production speeds of 3000 ppm and 2600 ppm, respectively, have the Turn and Pitch (TAP) Unit for rotating individual inserts in the machine process. As the unit rotates, individual inserts are picked up and turned 90 degrees for transfer and repitch. For higher production speeds, two product streams can feed into two separate packaging

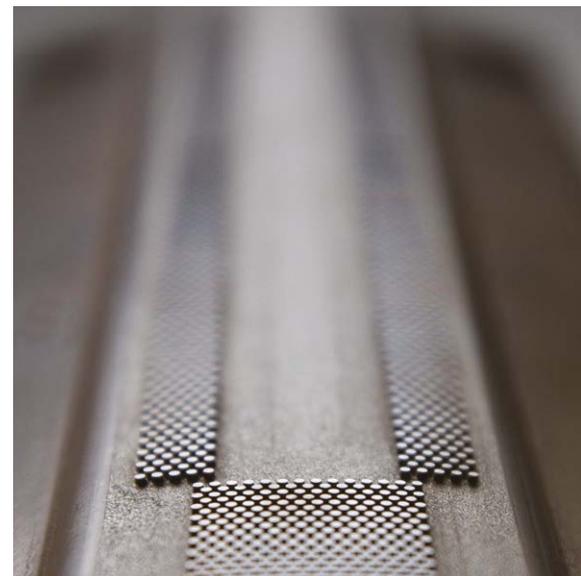
machines with the Double Pad Turner. Two identical rotator units pick-up the product from the main process flow and rotate 90 degrees, diverting to the proper packaging machine. In addition, the platform includes the DEDE300 with production speeds of 1500 ppm for panty liners and 1000 ppm for sanitary napkins. The Universal Foam Applicator eliminates size changes, stretching foam strips and applying them at specific distances. The Flexographic Printing Unit can be included as well for each production solution.

7. Finally, the DEDE400 is included with its unique cross machine production process. Products are manufactured at 90 degrees to production direction, providing production speeds of 1500 ppm for both panty liners and sanitary napkins, and 500 ppm for winged napkins.
8. Plus, JOA continues providing face mask machines, building on its nearly 25-year history by introducing its patent-pending design for the efficient production of quality face masks and expanding into isolation gowns.

Sustainable solutions

The market continues to demand higher premium features with greater production efficiency, and JOA responded with several new innovations.

1. The patented design of an expandable absorbent core structure improves the performance of high-SAP core products. The unique product feature and process design ensure



JOA's Single Anvil In-Line (SAIL™)

the absorbent core and core wrap expand in unison, maintaining the overall integrity of the product, giving the manufacturer all the benefits of SAP and the user the confidence in the disposable hygiene product.

2. In addition, the recently announced Single Anvil In-Line (SAIL™) Bonder technology leverages a patented design that provides better bond strength with unique designs, reduces overall costs for maintenance and material consumption, plus allows simple adjustments for size changes. The most significant aspect for efficiency, however, is that these benefits are provided at top production speeds, 1000-1200 ppm. Until now, the traditional ultrasonic process was limited by the dwell time required to form bonds of sufficient quality, limiting machine speeds. JOA's invention breaks through barriers and provides consistent quality at the highest production speeds. Furthermore, with the precision of the process, seams require less material which creates a more aesthetic product.
3. Specific technologies benefitting absorbent cores include forming

processes that create highly defined yet soft edges with less waste, with the cost advantages of the discreet forming process. Solutions for strand products make high density features practical, and the overall strand maintenance easy and cost-effective. As an alternative to strands, JOA's patented lamination process provides OEM elastic film with fewer materials. These efficient technologies, and many more sustainable solutions, are included in JOA converting machines and available for other makes.

4. Furthermore, JOA maintains its focus on reducing material waste in three major categories: start-up/shutdown, material splicing and automated correction. Combined, these innovations minimize material use by delaying the initiation of high-cost material features and intelligently correcting process errors, reducing rejects while improving product quality. Additionally, new inventions, such as the SAIL™ Bonder, minimize material use which prevents concerns about waste. These efforts reduce the environmental impact and operating expenses.

JOA® solutions are also found in related industries such as filtration, food pads, homecare, medical, packaging, and other specialty production needs.

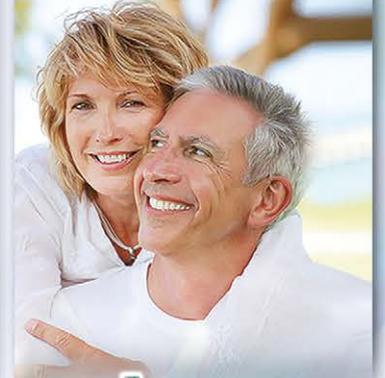
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JOA J8T baby diaper machine and the SAIL™ ultrasonic bonder



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YANKEE DRYER WITH FORGED SHELL: FEATURES AND BENEFITS

Fabrizio Tonello
Technical Director, A.Celli Paper

The Yankee Dryer is a key component in a tissue paper production plant. Being subjected to both the pressure and the heating of the steam from the inside and the load of the presses from the outside, the Yankee Cylinder undergoes high thermal and mechanical stresses. To cope with this, a very complex mechanical structure that must meet extremely high requirements in terms of safety and operational reliability is required.

UNIFORM
DRYING

HIGH
EFFICIENCY

The Yankee Dryer has a diameter that can vary from 4 to 6 meters and is usually built in cast iron or steel, although nowadays the trend sees the use of steel prevail for its many advantages, including a better heat transfer.

The extreme importance of the Yankee Dryer derives from the fact that in the production of tissue paper, since the latter is characterized by a low basis weight, the drying process of the paper sheet is performed using, as a drying cylinder, only the Yankee Dryer instead of various batteries of cylinders, as occurs in the production of normal paper. In summary, the main functions of the Yankee Dryer are:

- The transport of the sheet of paper
- The creation of the nip with the suction press, to remove an additional amount of excess water in the sheet before the evaporation process
- The drying of the sheet by means of thermal transfer
- The creation of a base for the creping process

The continuous increase in machine speed, steam pressure and production requirements, not to mention the intrinsic characteristics that a Yankee Dryer must possess to create a high quality final product, represents a major challenge for manufacturers.

For these reasons, and to overcome some of the technical limitations of the shell construction process that involves the use of welding, A.Celli has designed and built its steel Yankee Dryer with a shell completely forged in one piece: a solution, such as we will see, more secure, reliable and extremely efficient. A.Celli's objectives and the characteristics of the IDEAL® forged Yankee Dryer Minimizing mechanical problems while ensuring greater solidity and better heat transmission: these were the objectives that A.Celli intended to achieve. All this has become possible thanks to the IDEAL® forged Yankee Dryer, the new production technology conceived and patented by A.Celli Paper to meet these growing needs.

The distinctive feature of our YD is the construction process of the shell, made from a single piece of steel, which involves the following steps:

- Heating of steel to reach a temperature of more than 1200 ° C
- Forging
- Hot rolling process aimed at achieving an optimal crystalline grain size

The result of this process is a shell of homogeneous material without welding: a highly innovative product that eliminates any chance of deformation, both during the processing phase and during its use. The internal processing of the grooves, also patented, is characterized by an innovative design that reduces the possibility of shell deformation, relieving the tension on the sides of the shell itself and ensuring better heat transmission, with a consequent increased drying capacity of the Yankee.





The homogeneous material, characterized by a high resistance to the propagation of cracks, and the unique structure, free from residual stress, allow a greater variation in operating pressure and definitively eliminate the risk of breakage. Therefore, unlike the traditional method that involves welding operations, both the possibility of finding mechanical defects in the welded area and the need to carry out the numerous periodic and maintenance quality checks that require the interruption of the production line are eliminated at the root.

The innovation offered by A.Celli is completed by the head insulation system, made by means of a patented insulating ceramic layer and a polycarbonate cover in order to minimize heat dispersion and consequently reduce standard steam

consumption. Ceramics, guaranteeing better and more stable insulation than conventional materials such as rock wool, allows the use of thinner panels and maintains its insulating properties unaltered during production. Finally, the use of bolts to fix the heads to the shell by means of bolts allows the elimination of welding and the consequent deformations and residual stresses in the coupling in another area subjected to high stress.

The final result is an innovative and unique Yankee Dryer on the world market which, from the data collected, is able to reduce costs (due to maintenance activities and lost productivity during downtime) by 94% in the first 12 years of use.

For more information about A.Celli Turnkey Tissue Plant solutions, download the free eBook **“How and where to intervene to reduce the energy consumption of a Tissue plant”**.



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