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PACKAGING NEWS

MARCH/APRIL 2020

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Loop founder Tom Szaky shares circular vision
ANZPAC Plastics Pact signals industry action
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PACKAGING NEWS



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APPMA and PKN bring you this regular special supplement, focused on news, trends, and technology relevant to the packaging and processing machinery sector.



COVER: Ecolean shows brand owners how to walk on the lighter side in liquid packaging. Read more about the company's life-cycle approach and the products that support it on page 48. www.ecolean.com

PKN

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The best-laid plans...



THE best-laid plans of mice and men have certainly gone awry. Who could have foretold that our first quarter would play out in such a dramatic and disruptive fashion. First the Australian bushfires, followed by local floods, and then the virulent outbreak and galloping spread of Covid-19 that has sent shockwaves through global supply chains and stock markets.

As I write this, events big and small are being cancelled or postponed at a rate of knots, and we await news on packaging and processing megashow interpack, set to take place in Germany in May. We've published a show preview in this issue (see pages 36-44), cognisant that it may well be postponed to a later date while the magazine is at the press. No matter. The technology that would debut at interpack is relevant and valuable to our audience, regardless of where and when it is physically showcased. Indeed, therein lies the value of an engaged and authoritative media platform as a channel to get your message to market when you can't do so in person.

In our quest to ensure our audience is kept abreast of news and industry developments, PKN has expanded our editorial team, and I'm delighted to announce that we

have a new editor, Ian Ackerman, who has stepped into the role with enthusiasm, and has already proved to be a valuable resource as savvy news reporter and feature writer (see his interview with Loop founder Tom Szaky on page 18, and his in-depth look at the beverage packaging sea change, page 46).

Another positive initiative is the introduction of our weekly video news bulletin, available on our website and via our weekly broadcast, to complement our regular weekly enewsletter and our monthly Machinery Matters digital update.

Speaking of positive news, the launch earlier this month of the ANZPAC Plastics Pact (see page 16) signals a turning of the plastics tide, from pledges and promises to actionable plans. The pact was launched during the inaugural National Plastics Summit (see page 8) and will be followed by the launch of the Our Packaging Future framework, which will outline clearly the steps that need to be taken to meet the 2025 National Packaging Targets.

Now, this framework is a set of best laid plans we hope will not go awry, because frankly we, as an industry, cannot let that happen.

Lindy Hughson – Managing Editor



Ian Ackerman (second from right) has joined the PKN team as editor. He's pictured here with (from left) associate editor Wayne Robinson, journalist Doris Prodanovic, and managing editor & publisher, Lindy Hughson.

“Therein lies the value of an engaged and authoritative media platform as a channel to get your message to market when you can't do so in person...”

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TOP STORIES FROM THE
PACKAGING NEWS WEBSITE
PACKAGINGNEWS.COM.AU1 **HMPS OWNER MARK EMMETT BUYS PROPAC INDUSTRIAL**

Owner and MD of HMPS Mark Emmett has bought Sydney original equipment manufacturer Propac Industrial. (See story opposite)

2 **CONTAINERBOARD FACES CRISIS AS BUSHFIRES BURN TREES**

This summer's bushfires wreaked havoc for kraftliner producers, hitting plantation forests around the Visy mill in Tumut, leaving unparalleled destruction. (See story p10)

3 **PACT GROUP PROFITS UP ON SALES SLIP**

Pact Group's results for the first half of FY 2020 showed higher profits, but a slip in sales from decreased contract packaging work.

4 **NESTLE'S \$3BN BOOST TO PLASTIC PACKAGING REDUCTION**

Nestlé said it would invest \$3bn to shift from virgin plastic to food-grade recycled plastics. The move was hailed by the Ellen MacArthur Foundation and Planet Ark.

5 **VISY VERSUS PRIVATE EQUITY IN OI AUCTION**

Visy is competing with two private equity firms in the battle for OI's ANZ assets as the bidding enters its final round.

6 **ACCC GREENLIGHTS SALE OF ORORA FIBRE**

The watchdog has no beef with Orora's sale of its Australasian fibre business to Nippon Paper subsidiary Australian Paper. (See story p7)



Mixed bag for industry heavyweights

THE reports are in, and the big end of town's half-year results were mixed. Some of the big packaging companies are feeling the pinch but managing to keep profits up while sales and revenue slip. But there are some upsides for the packaging industry heavyweights.

Orora saw a 13.3 per cent decrease in NPAT, in the half year through December 2019, compared to the prior corresponding period, down to \$76.6m. The company's sales revenue was up 13.3 per cent compared with the prior corresponding period to \$1.8bn.

However, there was a bright spot for Orora in its Australasia operations, with growth in its beverages business. Sales revenue for the Australasia operations (comprising the beverage business group with contributions from glass, cans, and closures divisions) was up 2.4 per cent compared with the same period last year to \$412.2m. EBIT for Orora Australasia over

the half-year through December was reported to be \$82.6m.

Orora's CEO, Brian Lowe, admitted that the first half of this financial year was "challenging". He said subdued economic conditions across the company's geographies impacting earnings.

Coca-Cola Amatil saw revenue growth across all its business segments over 2019. Revenues for its Australian beverage business increased 2.4 per cent. This was the first full-year revenue increase for the division since 2012.

However, the Australian beverages division saw a 1.9 per cent decrease in EBIT to \$369m, down from \$376.1m in 2018. But the beverages division still

accounts for 57.7 per cent of the group's total EBIT.

Amcor improved its outlook for the 2020 financial year in its first-half results. The company reported an adjusted EBIT of \$699m, up 4.4 per cent in constant currency terms. It is continuing to integrate US flexible packaging outfit Bemis, which has delivered about \$30m in pre-tax synergy benefits.

Pact Group saw its profits nudge upwards in the first half of FY 2020 on the back of stronger offshore margins, as sales slipped from decreased contract packaging work. Pact's revenue was \$886m for the period, a three per cent decline on the same period last year.

However, the company's NPAT before significant items was \$37m, up four per cent compared with \$36m in the prior corresponding period.

Pact Group said the improved margins were delivered through "the improved recovery of prior period pricing lags along with strong cost control and overhead management".

And finally, Visy has put a bid in on O-I's Australasian business. It is up against two private equity firms. ■



RIGHT: Brian Lowe, Orora CEO

ABOVE: Coca-Cola's Australasian business saw its first revenue increase since 2012.

HMPS owner Mark Emmett buys Propac Industrial

SYDNEY-BASED original equipment manufacturer (OEM) Propac Industrial has been snapped up by Mark Emmett, who is also the owner and managing director of Adelaide-based OEM HMPS.

Propac Industrial is a vertical form fill seal (VFFS) equipment manufacturer founded in 1992 by partners Craig Pullen and Kim McFadden. The pair has built the business into a formidable player in the VFFS machinery sector, with more than 600 installations in Australia, New Zealand, the US, and other markets.

The company designs and builds VFFS machinery at its facility in Sydney, where its manufacturing processes

– fabrication, component manufacture, assembly, electrical, and software design – are carried out.

Emmett, who purchased Propac Industrial for an undisclosed sum, told *PKN* he plans to keep the Sydney manufacturing facility operating as usual, and will retain all Propac Industrial employees. Emmett will take up the role of managing director, while Pullen – the innovator behind the original VFFS machine that established the company – will remain in the business as a consulting engineer. Assisting Emmett with the integration process is HMPS engineer James Allen.

Emmett, who purchased Propac Industrial for an

undisclosed sum, told *PKN* he plans to keep the Sydney manufacturing facility operating as usual, and will retain all Propac Industrial employees. Emmett will take up the role of managing director, while Pullen – the innovator behind the original VFFS machine that established the company – will remain in the business as a consulting engineer. The two businesses, Emmett stressed, will operate independently but synergistically.

Asked what attracted him to Propac, Emmett said when he was looking to grow HMPS, he struck on the idea of buying Propac to grow both businesses side by side. The deal was finalised in January. ■



New owner of Propac Industrial: Mark Emmett

ACCC greenlights Orora Fibre sale

THE ACCC said it would not oppose Orora's sale of its Australasian fibre business to Nippon Paper subsidiary Australian Paper. Orora signed an agreement to sell the business for \$1.72bn in October.

According to the commission, Australian Paper is the only independent, non-vertically integrated, domestic supplier of certain paper packaging inputs made from kraft fibre. After the acquisition, it would be vertically integrated with one of its major customers, Orora Fibre.

ACCC commissioner Stephen Ridgeway said the key focus of the investigation was the impact of this integration.

"We decided not to oppose this acquisition because we considered that imports and other Australasian producers of



Orora's fibre business can be sold to Australian Paper, the ACCC says.

packaging paper products would continue to provide options for buyers," he said.

"Although imports of kraft linerboard, used to make cardboard boxes, are limited, we found it is readily traded globally and is produced by several manufacturers around the world. If kraft linerboard was no longer available in Australia, Australian purchasers would be able to import this product at competitive prices." ■

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Major announcements made at National Plastics Summit



INDUSTRY leaders gathered in Canberra at the National Plastics Summit to find new solutions to the challenge of plastic waste and prompt action from governments, industry, and nongovernmental organisations.

Several companies made significant announcements in concert with the summit.

The Prime Minister Scott Morrison made a speech at the

summit and called for better kerbside recycling.

"When we take the time and effort to sort, clean, and dispose of something in the recycling bin, it's reasonable to think it'll be recycled – but only 21 per cent of plastic waste put in the yellow-lidded kerbside bins is recycled," he said.

"We're getting ripped off. There's an implicit promise.

You've got the bin, you put it in there, and you expect the right thing to be done with it. It's important that when we have programmes in place to deal with that material, that promise is honoured. Otherwise people will give up on it."

Nestlé and iQ Renew announced they would collect soft plastics from more than 100,000 homes through kerbside recycling in a trial programme. It aims to find a better way to collect, sort, and process soft plastics.

Sandra Martinez, CEO of Nestlé Australia, said the company wanted to find sustainable paths to recycle packaging.

"While we are working to make all our packaging recyclable, we know that soft plastics is an area that needs greater focus and collaboration. We need to find ways to drive more recycling here," she said.

Sussan Ley, federal Minister for the Environment, said the pilot would support more sorting soft plastics, which have significant recycling potential. "The recycling economy starts here," she said.

At the summit, Pact Group said it would invest more than

\$500m in facilities in a move to lead the circular economy through investments in sustainable packaging, reuse, and recycling initiatives.

Pact Group is also investing further in innovation, technology, and materials science capabilities to enable increased inclusion of recycled content.

"Pact is already Australia's biggest recycler and user of recycled materials in the Southern Hemisphere – but we have ambitions to go much further," Pact Group non-executive chairman Raphael Geminder said.

Unilever will make it easier to recycle black plastics. At the summit, the company said it was making its black HDPE plastics with a pigment that can be detected by recycling plant scanners so they can be properly sorted and recycled.

This means an additional 100 tonnes of plastic bottles can be sorted and sent for recycling each year. The pigment is already used in the TRESemmé and Dove brands. ■

Pact Group non-executive chairman Raphael Geminder with Environment Minister Sussan Ley and others.

Ocean clean-up startup gets investment boost

SEABIN, a system for capturing maritime waste, including plastics, smashed its fundraising goal of \$1m in four days.

The Seabin skims the surface of the water in marinas and ports by pumping water through itself. It can intercept floating debris. It also has oil-absorbent pads that can clean petroleum surface oils and detergents. It is designed to be used in calm water environments.

Pete Ceglinski, CEO and co-founder of the Seabin Project, said it was "a bit of a shock" they had beaten the goal.

"We're still processing it," he said. "The majority of these investors are first-time investors. They are regular people with concerns about the environment, wanting to be a part of the solution."

Ceglinski said there is a leakage in the waste system



that allows plastics and other rubbish to get into the water.

"Our thinking is that we shouldn't have plastics in the water, we shouldn't be throwing it away, but we should be using it," he said.

A fleet of 860 Seabins are operating around the world.

"It's a problem everywhere. We're trying to turn off the tap with education and we're committed to cleaning it up." ■

MOU inked for plastic recycling plant

PACT Group, Cleanaway, and Asahi Beverages signed an MOU in February to jointly develop a plastic pelletising facility in Northern Victoria.

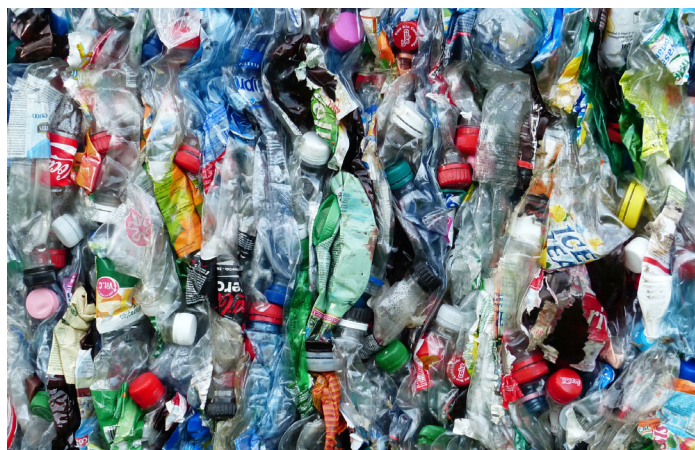
The facility is to have a capacity to process up to 28,000 tonnes of plastic bottles and other recyclables into flake and food-grade pellets, which will be used as raw material to produce packaging for food and beverages.

Cleanaway will provide feedstock through its collection and sorting network. Pact will provide technical and packaging expertise, and Asahi Beverages

and Pact will buy most of the recycled pellets from the facility to use in their packaging.

The proposed facility will be in Albury/Wodonga to service markets across the Australian east coast.

Pact's managing director and CEO, Sanjay Dayal, said establishing the facility would be a meaningful step in improving the plastics value chain. "The arrangement is clearly aligned with our vision to lead the circular economy and will support Pact in achieving our 2025 Sustainability Promise to offer 30 per cent recycled content



The planned facility will have a capacity for 28,000 tonnes of plastic bottles.

across our packaging portfolio," Dayal said.

Cleanaway CEO Vik Bansal said the partnership would create valuable materials from the waste Cleanaway collects. "It is a natural extension of our value chain and expands our footprint of prized assets," he said.

Group CEO of Asahi Beverages, Robert Iervasi, said

"This venture will allow us to use Australian-sourced recycled plastic resins to assist in meeting our sustainability commitment to transition our portfolio to recycled plastics."

The project is supported by a grant to Cleanaway from the Environmental Trust as part of NSW's Waste Less, Recycle More initiative. ■

LJM teams up with Hoop



LJM employs more than 500 people across NSW and Vic.

combined with Hoop's marketing capability would be a formidable combination in New Zealand.

"There are currently no dedicated co-packing companies in New Zealand. It is an untapped market that is waiting to be serviced. The joint venture will help leapfrog the businesses to become the leading co-packing specialists in New Zealand," he said.

"This is the first time a co-packing company has partnered with a brand activation company on this scale. The decision to partner with Hoop was influenced by their reputation in New Zealand, a shared FMCG target market, and complementary service offering. LJM's size and scale will help drive the co-packing market in New Zealand." ■

CO-PACKER LJM is expanding into New Zealand, forming a joint venture with brand activation specialist Hoop.

LJM said the aim of the venture would become the "go-to service provider for all co-packing requirements in the New Zealand market".

LJM employs more than 500 people across New South Wales and Victoria and moves about 60 million packaged products annually for FMCG, food, beverages, spirits, and pharmaceuticals companies.

Lance Miles, director and founder at LJM, said the company's co-packing expertise, com-

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Containerboard faces crisis after



Australia's containerboard sector is facing an unprecedented crisis of fibre supply, with the recent bushfires wiping out huge swathes of trees used for local manufacture of kraftliner, which is used as the outer layers of high-strength corrugated boxes. Wayne Robinson writes.

THE plantation forests around the Visy mill in Tumut have been decimated, with as much as 40 per cent of the softwood trees impacted by the fires either destroyed or needing to be salvaged. Recovery of pulpable wood from salvage operations is uncertain.

Industry insiders say the level of plantation destruction left in the wake of this past summer's enormous bushfires is unparalleled.

The plantations serving the Australian Paper mill in the LaTrobe Valley – which supplies kraftliner to Orora's corrugated box plants – escaped relatively unscathed, however the potential for further serious fires remains high.

The Visy mill is the country's largest manufacturer of containerboard materials. Reports suggest that production of kraftliner was curtailed at the facility. Visy uses mainly virgin fibre for kraftliner, and uses post-consumer paper and board to create its recycled containerboard grades at its Tumut mill. PKN understands that post-consumer paper and board was piling up at the Tumut mill.

Visy also uses the same fibre to manufacture a range of other industrial and packaging products, including pallet slip sheets.

The containerboard manufacturers (Visy, Orora, and Australian Paper) are all major exporters. They may need to delve into this supply to meet local demand, and one industry source confirmed this was already occurring. Post-consumer

waste recycling is already under intense pressure with the banning of waste of China and several other Asian nations meaning it cannot go offshore, and now has to be processed here.

Latest trade data indicates that nationally more than four million cubic metres of softwood logs were exported over the last year. The destruction of significant volumes of resource is already placing those exports under scrutiny. Maintaining production of high-quality kraftliner may require the curtailment of log exports to supply the Tumut mill and other facilities that rely on softwood logs and fibre.

Quoted in Nine Media, Snowy Valleys Council mayor James Hayes, says the fire destroyed timber plantations, which will take 25 years to regrow, which means years of difficulty for the Visy paper mill and workers. "I don't want to be alarmist, but it could be dire," he is reported as saying.

The seriousness of the situation was evident with deputy prime minister Michael

Maintaining production of high-quality kraftliner may require the curtailment of log exports to supply the Tumut mill and other facilities that rely on softwood logs and fibre.

bushfires burn trees

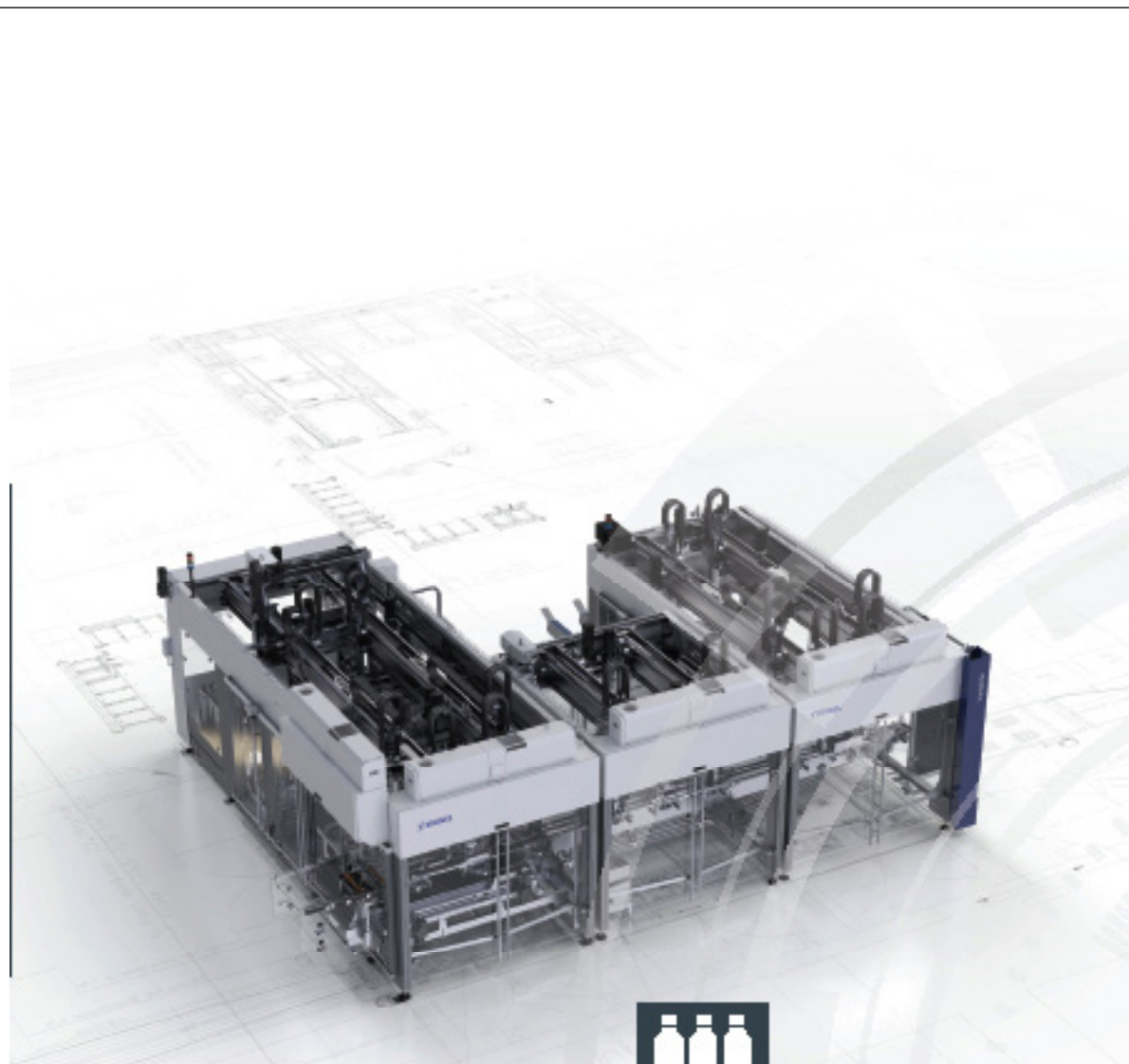


McCormack touring the area and saying many of the major industries in Tumut and Batlow faced years to make a full recovery, because they had been destroyed by the fires.

Australian softwood plantations have seen little actual planting for the best part of the past two decades. A combination of government inaction and the failure of some private plantation investment have dimmed interest.

Industry leaders have been calling for increased investment in new timber plantations for much of the past decade. Despite some statements of support from many, practical responses have proven thin on the ground, to date. ■

Bushfire consequences: Virgin tree stocks which produce kraftliner take major hit.



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Amcor's views on shifting packaging landscape

The packaging design landscape is shifting profoundly towards sustainability in Australia and abroad, and ASX-listed Amcor says it is working to optimise its packaging to align with this trend. We asked Michael Zacka, Amcor's chief commercial officer, about the company's progress towards sustainability, and where the packaging industry is headed in the near future.

AMCOR HAS PLEDGED TO END PACKAGING WASTE, BOTH IN AUSTRALIA AND ON A GLOBAL SCALE. WHAT ARE THE KEY TENETS OF THE PLEDGE?

In January 2018, we became the first global packaging company to commit to the 2025 pledge. We're making good progress to design all our packaging to be recyclable or reusable by 2025, to increase our use of recycled materials, and to help drive greater recycling of packaging around the world.

Most of our packaging is already designed to be recyclable or reusable. In fact, 97 per cent of our PET and HDPE packaging already is recyclable or reusable. We made the pledge – to develop all our packaging to be recyclable or reusable by 2025 – because we are inspired by ambitious goals, committed to building a great business, and already making a difference through packaging innovation.

But what will make the greatest difference is collaboration across the entire value chain to create a more circular system, develop better infrastructure solutions, and increase consumer participation in recycling.

YOU AND AMCOR VICE-PRESIDENT OF SUSTAINABILITY DAVE CLARK RECENTLY VISITED THE WORLD ECONOMIC FORUM. WHAT DID YOU LEARN IN DAVOS?

During the World Economic Forum, two things became clear.

First, we are aligned with our customers and suppliers on solutions that require industry-wide collaboration.

Second, we are determined to play a leadership role in bringing solutions to the market. Amcor is well positioned with our innovation focus to lead the way with packaging that is even more responsible. The World Economic Forum was an opportunity to share that determination with like-minded enterprises. Together we can tackle issues ranging from the need to feed growing populations to the challenge of global waste.

WHAT ARE THE MAIN CHALLENGES FACED BY FMCG COMPANIES AND RETAILERS WHEN IT COMES TO DELIVERING ON SUSTAINABILITY AND WASTE-MANAGEMENT TARGETS?

There are often contradictory objectives inherent within sustainability and waste-management targets. If we remove plastic packaging, we can create unintended consequences including more food waste and increased carbon emissions from substitute packaging materials. Therefore, decisions need to take the total environmental impact into consideration.

Plastics, in the majority of cases, are the most environmentally sound

packaging materials. The packaging itself is not the issue in isolation. Mitigating littering plays an equal role in eliminating leakage into the ocean, for example.

Driving up the use of post-consumer recycled content in package design is becoming a priority for large brand owners, and we're partnering with them to do that. As a very recent example, we co-created a 100 per cent PCR bottle with Unilever for Hellmann's mayonnaise in the US. That is one among many dozens of projects Amcor has underway to increase PCR, further lightweight our products, and incorporate more bio-based resins.

WHAT IS AMCOR'S INVOLVEMENT IN INNOVATION AND INVESTMENT IN WASTE MANAGEMENT?

We need the right systems and technologies to collect and manage the materials we generate as a society.

Amcor is collaborating with industry partners, governments, and NGOs to improve collection, recycling, and recovery of plastic packaging and develop new approaches to advance a circular economy. Rather than being waste,



OPPOSITE: Sustainability is designed into Amcor's products.

ABOVE: Amcor's AmLite Ultra Recyclable packaging is made using the company's high-barrier polyolefin film.



post-consumer packaging can be a raw material for new packaging or other uses.

To do this at scale requires education, legislation, and investment within the system. Our work with organisations such as the Ellen MacArthur Foundation, the Recycling Partnership in the US, and CEFLEX in Europe is already moving us closer to this reality. In Australia and New Zealand, we support RedCycle and Soft Plastics Recycling, because they help consumers responsibly dispose of flexible plastics.

WHAT ARE THE TOP PACKAGING TRENDS AND HOW ARE THESE PLAYING OUT IN AMCOR INNOVATIONS?

There are three trends that present a huge opportunity for our customers and Amcor.

Consistently high public awareness about the environment means brands are seeking more sustainable packaging. This is the number one trend in most regions. We are working with customers around the world to make sure their packaging delivers on sustainability and

consumer convenience, while maintaining the highest levels of product protection.

E-commerce continues to grow. Consumers have come to expect fast, seamless delivery models. The change in consumer behaviour is opening a new world for nimble brands to nip at the heels of FMCG giants. Companies such as meal kit company HelloFresh and snacks brand Nudie show how smaller brands can use product quality and a focus on user experience.

The third major trend is connected packaging. This is helping brands stand out on crowded shelves. A good example of this is our work

with Cadbury. Its Milk Tray brand has been a go-to offer for many UK chocolate lovers. However, the challenge was to have this nostalgic box chocolate brand appeal to a younger, digitally connected audience. We created an on-pack QR code using our MaxQ technology that meant the gift-giver could record a video message and the recipient could scan the QR code to watch it. This sort of personalised marketing creates a unique digital experience and attracts a new generation of customers.

CAN YOU EXPLAIN AMCOR'S PROGRESS ON CHANGING THE PACKAGING AND PLASTICS SYSTEM?

Food, drinks, medicine, and other vital consumer products reach people around the world in Amcor packaging. Our packaging is designed to protect those products and to be safe for consumers and good for the environment.

Packaging plays a vital role in the global supply chain; it works to protect and preserve. But it must be designed with a clear end-of-life solution to help keep waste from our environment. This is a priority for consumers, brand retailers, and everyone at Amcor.

Our research and development capabilities, coupled with our scale, enable Amcor innovations to effect genuine change that benefits the environment. We invest more into research and development than any other packaging firm. We have more than 1000 experts developing new materials, formats, and technologies with a focus on Amcor's sustainability pledge.

Keeping waste out of the environment requires the right design, efficient waste management, and consumer participation.

Our experts are collaborating with industry, governments, and NGOs to improve collection, recycling, and also recovery of packaging waste. Governments, brands, and retailers are essential players who can catalyse consumer action. We are increasing support for partnerships focused on waste management and accelerating our external engagement and advocacy activities. ■

We need the right systems and technologies to collect and manage the materials we generate as a society."

— Michael Zacka



Collaboration is key to sustainability

Every link in the packaging supply chain has been coming under increasing pressure to become more sustainable and environmentally friendly. But the industry has heretofore been sluggish to innovate and implement the level of change that consumers and governments are increasingly demanding.

A REPORT from McKinsey & Company, *The Drive Toward Sustainability in Packaging – Beyond the Quick Wins*, examines present sustainability efforts and looks forward to changes and innovation that would help the packaging industry meet sustainability demands.

One such change the report points to is an increase in collaboration between fast-moving consumer goods (FMCG) companies and retailers and packaging converters.

“Traditionally, packaging converters have played the role of the compliant supplier to their larger and more powerful brand-owning customers,” the report says. “However, as FMCG companies and retailers discover the need to move from an arm’s length relationship with suppliers to more of a partnership and collaborative approach, new opportunities could emerge for packaging converters – particularly for agile converters that are able to quickly expand their innovation capabilities.”

MAJOR SCALE-UP NEEDED

Packaging converters will need to invest in a major scale-up of their innovation capacity, according to the report. This innovation will have to go beyond the current trend of light-weighting, improving energy efficiency, and decreasing waste.

“This inevitably implies a gap between the need to support the sustainable packaging aspirations of the FMCG companies and retailers, and the range of development initiatives being undertaken by the packaging converters,” the report says.

“Examples of this gap include the fact that innovative application solutions that offer higher recyclability today are far from being as cost – and as barrier-efficient as incumbent solutions. Successful sustainability innovations will need to be at a neutral or affordable cost trade-off to gain scale.”

The report’s authors found that the upstream substrate producers are taking the innovation lead in sustainable packaging, working in areas such as mono-materials, with “high-barrier” properties that can also offer high recyclability, or incorporate recycled content.

The report singled out board producers, pointing out that there is work underway on high-barrier materials to replace plastics using bio-derived products, most of which are recyclable, compostable, or both.

“For example, several specialty paper producers

are developing flexible paper-based packaging with water-based coatings that can act as barriers for vapour, oxygen, and oil, and can therefore replace plastic/aluminium laminate packages, among other types of laminates,” the report says. “Others are working on creating lighter and stronger packaging board that offers lower carbon footprint while providing sufficient barrier properties. For example, one producer is including micro-fibrillated cellulose in its paper board to create lighter, stronger packaging board that also uses less virgin material.”

Turning to plastic film producers, the report points out that they are developing mono-material packaging solutions that are fully recyclable and can replace today’s multi-material flexible plastic packaging that cannot be recycled with current technology. “There is also substantial work underway to develop more food-safe-grade plastic films incorporating recycled content,” the report says. “This development will increase the use of recycled materials in the large quantities of flexible packaging that are used today for food.”

STRATEGIES FOR CONVERTERS TOWARDS SUSTAINABLE PACKAGING

There are no one-size-fits-all solutions for packaging converters to provide more sustainable packaging to their FMCG and retailer customers, the report says.

“There are complexities and trade-offs to consider if they are to navigate through these sustainability challenges in order to find the most effective route to growing and preserving value with application innovations,” the report says. “There are complexities and trade-offs to consider if they are to navigate through these sustainability challenges in order to find the most effective route to growing and preserving value with application innovations.”

The report outlines a three-part approach to help packaging converters to identify opportunities for greater sustainability.



Tetra Pak partnered with Australia's Brownes Dairy to develop a fully renewable milk carton.

The first step is to take the “low-hanging fruit” opportunities. These are actions converters and FMCG companies can take without broader value-chain co-ordination, and usually with close-to-zero impact on operating costs, capital expenditure needs, functionality, or attractiveness of the packaging. These include:

- removing unnecessary use of packaging;
- developing existing packaging by increasing the use of recycled content, while also considering different types of plastic that could improve the product's sustainability profile;
- substituting materials, such as introducing more mono-materials, to decrease the complexity of the combinations of different materials used; and
- communicating the sustainability narrative of products better.

The second step towards sustainability is the “harder but doable” category. This group of applications requires building a new approach from the ground up and collaborating with upstream and downstream partners. One example of this step in Australia is Brownes Dairy partnering with Tetra Pak to make a fully renewable milk carton for 25 products – which equates

As FMCG companies and retailers discover the need to move ... to more of a partnership and collaborative approach, new opportunities could emerge for packaging converters.

to more than 17.8m cartons per year. The packaging is made entirely from plant-based renewable materials.

And, the third group of initiatives are in the “system-level changes” category. This step requires changes to the broader packaging and recycling system, where development and implementation costs are also much higher. The report says, “this is what our colleagues refer to as ‘concerting effort around improving co-ordination across the value chain.’” Some examples of these system-level changes include improving exist-


ing recycling infrastructure, recycling technologies and circular value chains. Initiatives to raise awareness in consumers and drive community support for behavioural change around recycling is also important. “Another example entails developing new types of materials; involving fundamental scientific research and requiring collaboration within players in the substrate-making industries. There are already several examples of such initiatives, but so far these have mainly been driven by brand owners rather than packaging companies,” the report says. ■

McKinsey & Company published *The Drive Toward Sustainability in Packaging – Beyond the Quick Wins* in February 2020. The full report can be found on the company's website at: www.mckinsey.com/industries/paper-forest-products-and-packaging/our-insights/the-drive-toward-sustainability-in-packaging-beyond-the-quick-wins.

The report has five authors: David Feber, a partner in McKinsey's Detroit office; Daniel Nordigården, an associate partner in the Detroit office; Anna Granskog, a partner in the Helsinki office; Suku Ponkshe, an associate partner based in Atlanta; Peter Berg, a senior expert in the Stockholm office.



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Plastics Pact comes to ANZ

Timing is everything, and for the ANZPAC Plastics Pact, the time is now. APCO CEO Brooke Donnelly tells us why.

CURRENTLY just 16 per cent of all plastic packaging used in Australia is recovered for future use. As a country, we are a long way from reaching our National Packaging Target to see 70 per cent of plastic recycled or composted by 2025. The reality of such low recovery rates means that significant volumes of plastic waste are ending up in landfill, and worse still, entering our natural environments.

Stakeholders across the supply chain are united in agreement that change is critical. Programs to address plastic are being rolled out by state, federal and local governments, community groups and NGOs, along with a diverse group of businesses and industry associations. While momentum and action on the issue is admirable, there is a great risk that this unco-ordinated response will lead to duplication and wasted resources, and ultimately an inconsistent and less effective approach.

To deliver meaningful change on plastics, our region needs a significant intervention that co-ordinates and unites all stakeholders behind a clear and consistent approach. We need to move away from today's linear take-make-waste model and fundamentally rethink the way we design, use, and reuse plastics. A systemic shift tackling the root causes is required: a transition towards a circular economy for plastic in which it never becomes waste or pollution.

Launched in March 2020, the ANZPAC Plastics Pact is a world-first, region-wide program that will provide this approach. Designed to accelerate the transition to a circular economy for plastics, the pact will bring together businesses, governments and NGOs from across Australia, New Zealand and the Pacific Island nations to commit to eliminating the devastating impact of plastic on our environment.

Our region needs a significant intervention that co-ordinates and unites all stakeholders behind a clear and consistent approach."



ABOVE: ANZPAC Plastics Pact industry supporters at the launch at the National Plastics Summit in Canberra.

Delivered in partnership by the Australian Packaging Covenant Organisation (APCO), the Ellen MacArthur Foundation, the UK based Waste & Resources Action Programme (WRAP) and the South Pacific Regional Environment Program (SPREP), the program will be the latest addition in the global Plastic Pacts Network. There are a range of other successful Plastics Pact programs being rolled out in other countries, including Portugal, South Africa, and the UK. However, ANZPAC will be the first region-wide launch that brings together multiple countries under a single pact. It's very exciting for APCO and our membership base to be at the forefront of this work.

Under the ANZPAC program, participants will commit to deliver a series of concrete, ambitious, and time-bound targets, which will be established and launched in the coming months. Then under the ANZPAC Mobilisation Plan, participants will work to deliver a range of projects, clear reporting guidelines and the creation of an innovation hub, which will bring together

researchers and industry to co-ordinate their efforts. Finally, all ANZPAC signatories will be required to commit to publicly report on their progress each year.

Industry from across the value chain has already shown strong engagement with the program, with companies including Woolworths, Australia Post, ALDI, Unilever, Mars, Nestlé Oceania, Pact, CHEP, Amcor, Kmart Australia, Officeworks, Detmold Group, Veolia, SUEZ, Fonterra and Mondelēz International confirming their support for a common approach such as the ANZPAC program. The Australian Food and Grocery Council, the Australian Institute of Packaging, the Business Council for Sustainable Development Australia and Planet Ark Environmental Foundation are also strongly supporting the new program's development.

Right now, we are seeking the commitment of Australian, New Zealand and Pacific Island businesses to show their support for the ANZPAC program. Now is the time for Australia to demonstrate real leadership on the plastics issue. ■

For more information, visit www.packaging-covenant.org.au.



WHAT IS THE ANZPAC PACT AND WHAT WILL IT DO?

ANZPAC Plastics Pact is the latest addition to the Ellen MacArthur Foundation's global Plastics Pact network. It will work with businesses, governments, and nongovernmental organisations from across the plastics value chain in Australia, New Zealand and the Pacific Island nations to develop a common vision of the circular economy for plastics.

APCO said ANZPAC Plastics Pact will provide the intervention required to meet Australia's national plastic packaging target of 70 per cent of plastic packaging to be recycled or composted by 2025.

Aligned with the other initiatives of the Plastics Pact network, the ANZPAC Plastics Pact will work towards a set of ambitious, time-bound targets in the following areas:

- Eliminating unnecessary and problematic single-use plastic packaging through redesign and innovation;
- Ensuring all plastic packaging is reusable, recyclable, or compostable;
- Increasing recycled content in plastic packaging; and
- Increasing the reuse, collection, and recycling of plastic packaging.

The exact targets will be released towards the end of 2020, and progress will be reported annually.

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Reusable packaging: back to the future

The days of milkmen every morning are well and truly gone, but reusable packaging is an idea that is getting another day in the sun. Ian Ackerman reports.

Loop hopes to bring a reusable packaging revolution to Australia when it enters the market next year, through a partnership with Woolworths. Loop is a circular shopping platform designed by TerraCycle that replaces single-use packaging for consumer goods with reusable packaging. Loop has its sights on most consumer goods, from ice cream to laundry detergent, to deodorant to juice.

Tom Szaky, CEO of TerraCycle, says the idea behind Loop is to fundamentally change the packaging market. "It shifts from selling a pack every time an object is sold to either selling the package as a service or selling it once for every 100 times the product is consumed, whatever that may be," he says. "It's slightly different, and most of the time that's exciting, but it can be scary."

However, Szaky is positive about the opportunities for packaging converters with the Loop system. He says some packaging converters have been establishing internal divisions that are focused on reusable packaging. He also points to dispensing, sealing, and active packaging company Aptar as another positive example. "Aptar made a substantial investment in Loop, and they made it because they said, 'wait a minute, every one of our major suppliers are a part of this, and there isn't today a reusable pump,'" he says. "With them and Ecolab, we're developing a reusable pump, which, once available can become the standard engine for any pump that goes into the Loop ecosystem."

STEADY START UP

When Loop starts up in Australia, Szaky says the reusable packs will likely not be made in Australia, at least at first.

"The packs themselves are going to come from wherever the pack suppliers choose to order them, and we don't have a fundamental opinion on this," he tells PKN. "What will happen is as the volume rises here, there will be more pressure to ask packaging companies to make those domestically."

While the platform is still in test mode here in Australia, Szaky says what matters is that it gets up and running.

"Make it anywhere, make the thing exist," he says. "We're seeing a lot of pack suppliers get excited about creating reusable divisions. And because I can bring to them these massive consumer packaged goods [FMCG] companies, that they all want as clients, they're going to be even more motivated to create these reusable divisions. That's why we've seen some packaging companies invest in us."

In the Loop system, filling the packaging will have a similar model as the packaging itself, Szaky says. "As half of Australia's goods are filled abroad, in places like Thailand, half are filled here, the packs are going to be filled wherever they're usually filled. Because there is success in volume, that may put positive pressure on having, for example, a toothpaste company that fills in Thailand fill here," he says.



But the main goals at this early stage, Szaky says, are to make sure the system works well and to grow consumer appetite.

"My key ROI out of the Woolworths launch is that all their competitors, Coles and everyone, are like, let's scale the shit out of this, and then, all this stuff magically takes care of itself," he says. "I don't have to worry about asking Nestle to be smart and efficient. That's their middle name. I just have to worry that they have appetite. That's where I'm fighting the battle and within our resource capability its something we can really do."

THE DATA'S IN THE DETAILS

The ability to scan each package, and track it all precisely, opens myriad opportunities for tie-ins and marketing campaigns. Szaky says one of Loop's partners wants a unique code on every bottle so it can be tracked on a bottle by bottle basis. "This is something we can easily do on our end. This company wants to do a marketing campaign where a celebrity would use several bottles of the product at home," Szaky says. "Then, the company would take those bottles and put them into the ecosystem. Then, the campaign would prompt consumers to go to a website, type in the unique code on the bottle, and see if it was the actual bottle that the celebrity used – people would get a kick out of that."

Szaky says this is just one example of the unique things that can be done with reuse.

“My key ROI out of the Woolworths launch is that all their competitors, Coles and everyone, are like, let's scale the sh*t out of this, and then, all this stuff magically takes care of itself.”

— Tom Szaky





"You get sustainability, aesthetics, and new business models, while new functions are enabled," he says.

"There is so much cool stuff that has nothing to do with sustainability that is only enabled because of reuse," he says.

THE CARBON ANGLE

Loop is not a silver bullet for carbon emissions, Szaky says. But there are benefits if the packages are reused repeatedly.

"Every time you buy a new shampoo bottle, for example, it has the same impact over and over, because there is no efficiency on the second, third, fourth time you buy a new bottle of shampoo," he says.

"An aluminium bottle will absolutely

ABOVE: Loop aims to jumpstart the circular economy.

ABOVE RIGHT: The idea is to make consumer goods packaging cool and durable.

OPPOSITE: Tom Szaky, TerraCycle CEO.

have higher carbon impact on the first use, no question. It's an aluminium bottle versus, say, an HDPE bottle. On the second use, you're not making a new bottle, you're not melting it down or anything, so the impact goes down, then down again on the next use. What happens is you get a curve. And the curve gets closer to asymptote, the package divides out to effectively nothing. What you have left is

the carbon cost of transportation plus cleaning. At some point, even if you have a massively impactful package, a big number divides another big number down to nothing."

This is the reason behind the minimum use for each package being 10 uses, Szaky says. "While 10 is an arbitrary number, we can be relatively sure the pack divides out by then, as the drop is exceptionally big in the first few uses," he says.

Loop is looking towards the era of the milkman for a more sustainable future. It is a simple idea, but, combined with the energy of modern entrepreneurship it may just change the packaging industry for the greener. ■

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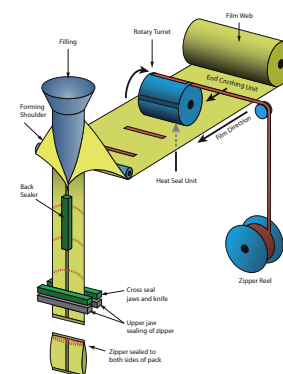
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AIP adds weight to dialogue on

The Australian Institute of Packaging joined industry leaders and stakeholders at the National Plastics Summit in Canberra in early March. Delegates shared their take-aways with PKN.

“ONE of the main themes that pervaded the summit was the vital role that consumer education plays in not only meeting our 2025 National Packaging Targets but, more importantly, to ensure that consumers are included in the sustainable journey the industry is currently undertaking,” says AIP executive director, Nerida Kelton.

“Communication is key to educate consumers on everything from the use of the ARL [Australian Recycling Label] on-pack to understanding why a brand is using recycled content in their packaging.

“We all have a role to play, and I walked away from the summit enthused that all parts of the value chain are wanting the same outcomes for the industry. A starting point is continuing the collaboration and open dialogue that we had at the summit.”

The AIP was also invited by the federal government to participate in the Children’s Summit that was held alongside the event. The AIP was tasked with spending the day with the children and helping them to understand the important role that packaging plays in society, and each of the

different materials used, particularly soft plastics. The AIP representative was education director Prof Pierre Pienaar who also had the opportunity to represent the World Packaging Organisation, in his capacity as president, at the significant event.

CHILDREN ASK THE IMPORTANT QUESTIONS

The Children’s Summit, which took place in Old Parliament House, saw 22 children in grades 5 and 6 from across the country – who had submitted the top summaries of action they have taken to reduce plastic waste in our environment – invited to air their views and learn more about packaging.

Fielding their questions were Pierre Pienaar, education director of AIP; Barry Cosier, Australian Food and Grocery Council (AFGC) director of sustainability; and Ryan Lungu, executive director at Canberra Environment Centre.

“The children’s questions were detailed, thought provoking, challenging at times, and well researched,” Pienaar told PKN.

Asked what their chief concerns were, Pienaar responded: “That they would come to Canberra and not be heard by the adults; how

long it will take to fix the plastic issue; how it can be fixed; and why the adult generation has left this mess for the children to fix.”

“The students would have gone back to their schools and communities having experienced that the adults had heard their voices, and they would be more informed of what can and should be done about plastics into the future to make our environment a better place,” he said.

STAKEHOLDER REFLECTIONS ON THE SUMMIT

Barry Cosier, AFGC director of sustainability, said the National Plastics Summit presented a unique opportunity for government, industry and the community to collaborate and discuss waste and recycling issues.

“The AFGC was encouraged by Prime Minister Scott Morrison’s announcement of planned government investment in new recycling infrastructure across Australia and a move towards incentivisation and co-investment to support industry,” Cosier said.

Stephen Webster, GM of Integrated Recycling, said the summit was “a great initiative with valuable contributions from industry and academia of the many different ways to create a circular economy in plastics”.

“The PM’s commitment to help fund Australia’s capacity upgrade to recycle plastic was welcomed as was the PM’s recognition of Integrated Recycling’s Duratrack recycled plastic railway sleeper project for use in large scale infrastructure projects,” Webster said.

The PM’s announcement was also welcomed by recycled plastics company Replas. Joint MD Mark Jacobsen said: “Replas was honoured to be invited to the National Plastics Summit, and proud to have our [recycled plastics] seat on centre stage and



LEFT: Among the leaders attending this landmark event was WPO president Pierre Pienaar (left) pictured here with James Dorsey, CEO TOMRA/Cleanaway JV and Joshua Holmes of Vanden Recycling.

ABOVE: Fielding questions at the Children’s Summit were (from left), Ryan Lungu, executive director of Canberra Environment Centre; Pierre Pienaar, AIP education director and WPO president; and Barry Cosier, director sustainability at AFGC.

plastics at summit

CREDIT: ALL IMAGES SUPPLIED BY NERIDA KELTON



used by government ministers and speakers. We welcome Prime Minister Scott Morrison's announcement and the strengthening of Commonwealth Procurement Guidelines, where government agencies will now consider the use of recycled content wherever possible.

"As successful recipients of the Resource Recovery Infrastructure Fund grant from Sustainability Victoria, we have invested in state-of-the-art machinery which will almost double our output of recycled plastic products, and we're employing new staff and gearing up for increased production.

"The National Plastics Summit was a fantastic platform for the circular economy discussion, and while mandating minimum quantities for procurement would create a stronger framework to address the waste crisis, Replas is in an excellent position with leading-edge technology to support the circular economy."

...we need to develop projects that are scalable and capable of being driven to large scale and with that become economically sustainable."

— Alan Adams
(MAIP) Sealed Air

TIME FOR ACTION HAS COME

For packaging industry professional, Alan Adams, the APAC sustainability director for packaging company Sealed Air, the summit was timely and reflected an industry that is "moving past pledges and commitments to real actions".

"I think the average Australian wants to hear that we are making real differences, real changes. This mirrors what we are hearing from our industry partners, so Sealed Air developments like recycled content in mailers and courier bags, recyclable meat trays and alternatives to black pigments now have real traction," he said.

"The three key themes I took away are that first, the problem is ours, we have to own it collectively and work to make real change. Second, we have to collaborate up and down the plastics lifecycle to create viable projects, and third, we need to develop projects that are scalable and capable of being driven to large scale and with that become economically sustainable.

During the summit it became clear how important total alignment is, Adams told PKN. "Prime Minister Scott Morrison announced a three-point plan including growing demand for recycled content through government procurement. We need materials like recycled plastic content in building materials, sound barriers and asphalt included in specifications so that procurement can act. We have work to do in getting all of society, government and business aware of and working towards the same goals," Adams said.

From all accounts, the National Plastics Summit was a significant and timely step for all stakeholders. ■



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Sustainability in service

A professional consultant who has made the quest for sustainable packaging an integral part of her life's work, Dr Carol Kilcullen-Lawrence has served as national president of the Australian Institute of Packaging for the past three years. Lindy Hughson asked her to share some career highlights.

WHAT MADE YOU CHOOSE A CAREER IN PACKAGING, WHAT HAVE BEEN KEY MILESTONES, AND WHAT IS YOUR CURRENT ROLE?

Arriving in Australia from the UK almost exactly 28 years ago, I found myself as an adhesive chemist testing the most suitable label for an array of packaging formats. They say you can't get away from sticky labels and they may be right, as I have been working in this field ever since. As a polymer chemist, my PhD enabled me to fully understand plastics and what makes them such a diverse and evolving packaging medium. A key milestone for me was taking a role as a sustainability specialist in 2011, as for so many years the aspects of waste and recycling had not been at the forefront of the self-adhesive label industry. However, the changes around that time gave me a significant challenge to achieve big steps in waste reduction and resource recovery.

My current role focuses on sustainable sourcing, bioplastics and life cycle analysis (LCA), as labels are crucial to package recyclability. This supports the Australian Recycling Label (ARL), together with APCO and PREP, to make a significant difference in cleaning up recycling streams.

AS PRESIDENT OF THE PEAK BODY FOR PACKAGING PROFESSIONALS IN AUSTRALIA, WHAT IS THE MOST IMPORTANT PROJECT YOU HAVE OVERSEEN?

The AIP plays an important role in educating packaging professionals about our rapidly changing industry. I am really pleased that during the past year we have broken many records regarding the number of training courses delivered. The



courses range from half day training to diplomas and degrees, all delivered by our members who are experts in their fields. Great also that industry has embraced the CPP programme showing that participants know their stuff and are keeping abreast of professional development.

YOU HAVE WITNESSED MUCH INNOVATION COME TO MARKET OVER YOUR CAREER, WHAT WOULD YOU SAY IS THE MOST INTERESTING/SIGNIFICANT?

My packaging focus is on recycling and resource minimisation, so it has been very rewarding to work with UPM Raflatac on two novel products.

Firstly, improving the yield of rPET flake has made it possible for labels to be removed during recycling and, using a 'switchable' adhesive RW85C, it's possible for a permanent label supporting high-end graphics, to be cleanly removed from the container under specific conditions during recycling.

A second remarkable achievement is using forest waste – pulp bi-products – to manufacture bioplastics. This involves UPM Bioverno naphtha as a drop-in chemical enabling a 'forest film' bioplastic without any fossil fuels.

Dr Carol Kilcullen-Lawrence is a fellow of the Australian Institute of Packaging and has served as national president since 2017.

I'm also looking forward to reducing industry waste by continuing to enable label liner recycling, and forging partnerships so label waste continues to be reused in novel markets.

WHAT'S YOUR VIEW ON RESPONSE FROM THE FMCG INDUSTRY AND PACKAGING CONVERTERS WHEN IT COMES TO GLOBAL CALLS FOR MEETING PACKAGING SUSTAINABILITY GOALS?

We have taken major steps as an industry in the last couple of years and I applaud brands that are achieving and exceeding sustainability goals. More steps are required for significant global impact, however. It is fantastic to work with many passionate professionals leading the way with new materials or reusing waste. Packaging sustainability is exciting – even when identifying a cost to choose a more sustainable option, many are recognising that it's truly a small cost if it benefits the planet. Consumers are more connected, brands have ongoing dialogue with customers, and research shows that many are happy paying a premium for a sustainable solution.

WHAT PACKAGING/ENVIRONMENTAL CONUNDRUM KEEPS YOU AWAKE AT NIGHT?

I do often wonder why many consumers complain about having too much packaging. As an industry, we know that packaging has been light weighted and minimised for years and what is left is essential to preserve products in transit. In my opinion, if consumers want less packaging, they actually need to buy less! If we are really serious about our environment, we need to recognise that we are using up resources, often manufacturing products that are simply junk – and often with short lives – that soon end up in landfill. I look forward to a world where we consider if we really need that product, or, do we simply just want it – then perhaps all of our lives could be less cluttered. ■

If consumers want less packaging, they actually need to buy less!"

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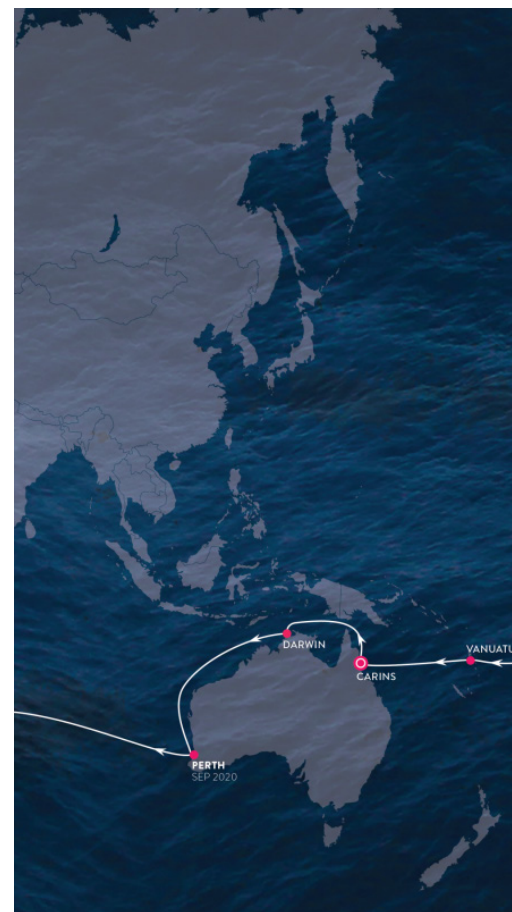
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Packed with purpose

Pippa Corry, founder of philo & co, shares her views on why we urgently need to change course on packaging and her mission to help the creative industry design for the future.

WE always loved nature – its intricacies and processes that keep our world beautifully in sync. But it's a complex and a fast-changing place. The natural world that our very existence depends upon is drowning in our waste and pollution. Societies, businesses and even governments are declaring climate emergencies, yet we continue to use finite resources like they are endless.

It's estimated the production of goods (clothes, food, and all our everyday consumables) accounts for up to 45 per cent of global emissions (Ellen MacArthur Foundation). So it begs the question: how can we better design products and packaging to overcome our climate and waste crisis? Unless we drastically change our course and innovate away from the linear processes that have got us where we are today, we will continue adding to a problem that we're already struggling to comprehend and manage.

Packaging has become one of our biggest global waste challenges, with the spotlight firmly on plastics blanketing our oceans, maiming wildlife and scarring previously untouched corners of the earth. Currently, only 9 per cent of plastic is recycled globally. It is a material designed to last a lifetime, often used for a very limited lifespan and then disposed

of. Very early into my career, I started asking myself, "What is the real cost of packaging? How and where are we sourcing all these materials and where do they go after use?" All I was finding was waste, a lot of environmental consequences and few solutions. So, I began my journey to help shape a better future. Fast forward nearly a decade, and philo & co was born to help the creative industry and consumer brands transition to a circular economy.

The circular economy is a transformative approach that systemically redefines how we use resources, challenging the current

take-make-waste linear economy. Through design, we can look to keep packaging in closed loops and retain its incredible material properties and use its monetary value for as long as possible. By adopting new mindsets and marrying circular principles with innovation, we can design new economies that look to have a positive impact on the world.

The links between business as usual and our climate catastrophe are too strong to not act. We're starting to see bold, ambitious businesses take on these challenges by fusing sustainability, strategy and design. Ultimately, design will play a key role in addressing packaging waste and the creative industry has the power to inspire and educate brands on alternative, more sustainable solutions.

The four pillars of philo & co address how sustainable design thinking and doing can lead to change.

#1 INSPIRE & EDUCATE: The linear economy is currently playing an active role in our climate and global waste crisis. We need to use creativity and innovation to inspire and educate people of the smarter, more resource efficient way of designing packaging. eXXpedition Round the World is an all-female, two-year voyage travelling over 38,000 nautical miles to explore plastics and toxins in

Packaging has become one of our biggest global waste challenges, with the spotlight firmly on plastics blanketing our oceans."



our oceans. Having been selected as part of a 300-strong team, my first-hand experience sailing from Fiji to Vanuatu will support solutions-based science and help shift perceptions in our industry to educate and inform how we design, and close the loop on waste. Our mission is to:

- define upstream solutions,
- shift perceptions by using our platform to educate and inform, and
- build a community of change makers.

#2 DEFINE: Bring meaning to brand purpose: If we're to help brands have a positive impact, sustainability needs to play a role in a brand's DNA. This means it is imperative that sustainability is integrated at a strategic level. Branded packaging will therefore have clear commitments to abide by in line with sustainably considered values.

For example, Toast Ale is brewed from surplus bread to reduce the effects of food waste on climate change. 'Here's to Change' builds on the brand owner's values to use climate-focused packaging communication to



convey its drive to create a decarbonised world with less waste.

#3 MITIGATE WASTE: Waste is a consequence of design. Through the combination of long-term strategy and collaborative design thinking, we can innovate circular packaging solutions and help shift the focus throughout the supply chain. Reusable and returnable packaging service RePack has its 'Upgrade Your Unpacking' initiative, which is a great example of how a brand has redesigned e-commerce packaging to prevent single use material waste and reduce CO2 emissions by 80 per cent.

#4 RETHINK: Our current economic systems are failing us. Circular business models offer an abundance of growth opportunities while reducing a business's environmental and social impact. We're seeing big FMCG players like Unilever "innovating for a re-use, refill revolution," which will fundamentally shift the role and design approach for packaging of the future.

It's a big challenge, but it won't go away, so let's do what our industry does best: find solutions where others see problems. Let's collaborate, rethink, redesign, and lead change. We have an opportunity to revolutionise the way we use resources and create a new norm through radical design.



Pippa Corry is a sustainable brand and packaging consultant with more than nine years' experience in the design sector, innovating how purpose-driven brands can shape consumer purchasing and reduce environmental impacts across FMCG. She is committed to advancing responsible production, and consumption through the use of circular economy principles. philo & co helps creative agencies and consumer brands transition to a circular economy and integrate sustainability into the heart of business and packaging solutions.

CLOCKWISE FROM FAR LEFT:

Plastic waste finding its way into the ocean is a major environmental issue around the world. eXXpedition map – eXXpedition Round the World is an all-female, two-year voyage.

The voyage explores for plastics and toxins in the ocean environment.

Toast Ale is brewed from surplus bread.

Brand in hand

Events and brand partnerships go hand in hand, and the world's largest LGBTQI+ night-time festival, Mardi Gras, is no exception. PKN speaks with Mardi Gras CEO Albert Kruger on how brands big and small can impact on events.

THERE is no doubting the impact brand partnerships can have on an event. The involvement can extend into many forms, whether it be campaigns, products or commemorative collector's items, where such brand associations have the potential to be recalled by consumers and event attendees. For Sydney's annual Mardi Gras festival, the support from partners has the potential to go beyond the two-week event.

The theme for this year's Mardi Gras celebrations focuses in on 'what matters' for the LGBTQI+ community, and is presented as both question and a statement, Mardi Gras CEO Albert Kruger told PKN.

"We wanted our community to come back to us and voice what matters to them so we can realign, refocus and make sure we are delivering on these expectations," Kruger says.

2020 marks 42 years of Sydney's Mardi Gras, the biggest LGBTQI+ night-time festival in the world, and one of the few parades that has more spectators than participants. Up to 400,000 people gather around Sydney's Oxford and Flinders streets for the parade, giving Mardi Gras's 51 partners and stakeholders – such as ANZ, L'Oreal, Yak Brewing, Woolworths Group, and Absolut Vodka – the opportunity to reach communities on an even greater scale.

"Mardi Gras is a globally renowned festival, and there is a lot of dedicated focus on how we curate the festival, who we are and how our community, partners and agencies can demonstrate their message in each of the floats," Kruger says. "All the organisations that partner with us at Mardi Gras have the opportunity to use this platform to drive their key message. These messages should align and form part of their diversity and inclusion programs; it is a win-win situation to both our partners and Mardi Gras."

Examples such as Lion's partnership with Brooklyn Brewery's launch of its Brooklyn Stonewall beer, as well as Absolut Vodka's Absolut Rainbow, show companies joining

in on the celebrations with their own product packaging during Mardi Gras. Kruger says such brand associations to the event can drive particular messages home, as well as demonstrating to consumers how these companies are championing these messages.

"It's a brand building exercise to show consumers how these companies are proud supporters of the community and supporting the diversity agenda," he says. "It's a similar vein to how proceeds from products are giving back to development programs, and how brands build trust."

"There's more engagement from brands than ever before, but there is an increasing expectation from Mardi Gras to push back on the responsibility of these corporates to demonstrate they are LGBTQI+ focussed, and that they support equal rights and diversity," he says.

Kruger says for brands to partner with Mardi Gras in the future, the organisation's stakeholder and partnership team are always on the lookout for new, innovative ways to get the message out there.

"We're excited to be collaborating with brands overall, there are tonnes of opportunities that could be rolled out and exciting activations that can be explored around any aspect of the festival," Kruger says.

"The festival attracts 100,000 people to Fair Day and 400,000 people to the parade lining Oxford Street to see 200 floats on the night. This is a great opportunity for food and beverage companies to activate product launches to a captive audience. Energy drinks, alcohol suppliers, and beer companies are also now moving into this space.

"A focus for us moving forward would be able to offer sustainable options throughout the three-week period. This would mean there's an opportunity for companies with a sustainable ethos to be integrated as part of Mardi Gras." ■



Lion joins in on the Mardi Gras celebrations with specialised packaging for its partnership with Brooklyn Brewery's launch of its Brooklyn Stonewall beer.

BELOW: Mardi Gras CEO Albert Kruger says there is more engagement from brands now than ever before for the festival.

ABSOLUT RAINBOW CELEBRATES MARDI GRAS

Absolut Vodka has brought back its Absolut Rainbow bottle and a new love letters campaign to share stories of the LGBTQI+ community and their allies, as part of the 2020 Mardi Gras event.

The Absolut Rainbow bottle is a limited edition run during the Mardi Gras season each year, and was made in collaboration with Gilbert Baker, the designer of the original flag.

The 2020 edition is screen printed on the glass and uses brush strokes for each colour of the rainbow flag across the bottle.

Absolut is aiming to gather one of the largest collections of positive messages in Australia through its Absolut Love Letters campaign and share these stories publicly across the country during the Sydney Gay and Lesbian Mardi Gras 2020.

Mardi Gras CEO Albert Kruger said: "We're excited to welcome Absolut back as partner for our festival this year."

"Absolut has a long-standing legacy of supporting the LGBTQI+ community across the world, and we are proud to partner with them as they Make Love Louder this year."



APPMA

Australian Packaging and Processing
Machinery Association Limited

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Looking to positives after a tough start to 2020



“The issues for Australia lie in our reliance on [China] as our biggest export market and trade partner for manufacturing education, tourism and minerals exports...”

Welcome to the latest edition of *Machinery Matters*, brought to you by APPMA in partnership with *PKN Packaging News*.

It is fair to say that the beginning of 2020 has been a very difficult one, with bushfires wreaking havoc across several states and the outbreak of coronavirus at the end of last year continuing to disrupt the Australian supply chain well into this year.

The bushfires, which began late last year, continued into mid-February. Even after the immediate threats had settled, it was about far more than the tragedy of lives lost, the loss and displacement hundreds of thousands of animals, or counting the cost of razed homes, businesses, infrastructure and land. The impact on GDP and the economy is but one measure. The emotional cost on communities – and the entire nation – will be apparent for a long time to come. Our hearts go out to all those affected, understanding there is still a long way to go before normality comes into play.

Another major occurrence in the spotlight continues to be coronavirus or COVID-19. With over 125,000 people at the time of writing affected around the world (more than the number infected by SARS in 2002 and 2003), COVID-19 has disrupted the Australian supply chain and our economy.

The outbreak began late last year in China, the world's second-largest economy, worth some \$14 trillion. The issues for Australia lie in our reliance on that nation as our biggest export market and trade partner for manufacturing, education, tourism and minerals exports to name just four. As an example, nearly the entire world's iPhones are made in China, and with parts of the supply chain for many Australian businesses located in, or passing through the COVID-19 outbreak epicentre for manufacturing or finishing, it means the potential for major disruptions for some time to come. As ratings agency Moody's summed up: complicated supply chains and just-in-time production could result in production outages in Chinese factories having far broader spill-over effects.

UPCOMING INDUSTRY EVENTS

2020 is a busy year, with a range of domestic and international exhibitions and shows, although some of these are at risk of postponement at the time of writing.

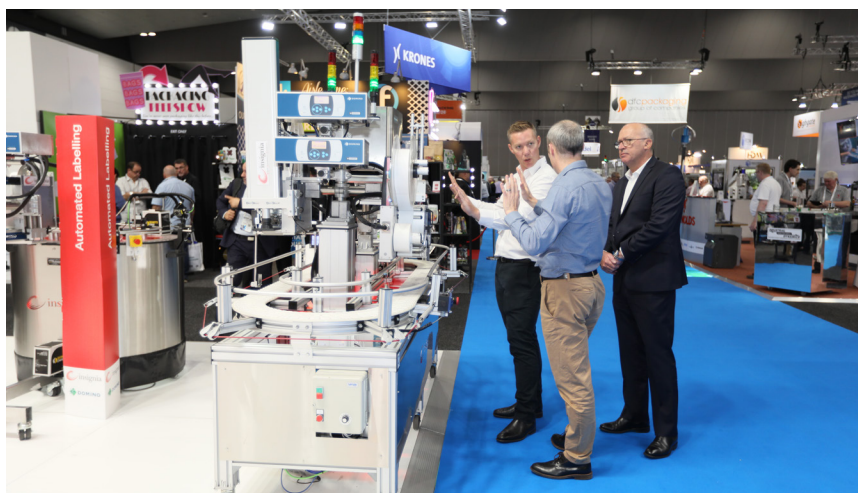
Interpack is the first and largest of all the exhibitions, showcasing worldwide innovation and developments within our industry. Scheduled to be held in May at Messe Düsseldorf in Germany's North Rhine-Westphalia state, interpack will display entire value-creation chains, from packaging production and distribution, through to quality assurance and consumer protection.

A number of Australian companies are exhibiting at interpack, either directly or through their principals, with APPMA members making a strong showing either as visitors or exhibitors.

Back on Australian soil, the partnership between the APPMA and AUSVEG, the peak industry body for Australia's vegetable and potato industries, is ready to kick off with the APPMA participating in Hort Connections 2020 in June in Brisbane. The event is a great opportunity for networking, education and business across the entire fresh-produce industry. A number of APPMA member companies will join us at the Brisbane Convention Centre from 15-17 June, showing supply-chain solutions, cutting-edge products and technological innovations. The show will provide the opportunity for further interaction, networking and engagement across industry sectors, and I look forward to seeing many of our readers at the event.

I would just like to remind readers that the focus of *Machinery Matters* is to provide news and insights about members' businesses, and to showcase their innovations, developments and successes in the packaging and processing machinery industry. For those APPMA members who have not explored the benefits, I encourage you to do so.

MARK DINGLEY,
CHAIRMAN



FAR LEFT: AUSPACK is APPMA's flagship event.
LEFT: Denni Egan has joined the APPMA team.

APPMA growth brings team development

Following the APPMA Board's decision to restructure the business and operations team in 2018, including the establishment of a formal general manager role currently held by Michael Moran, the association has experienced a rapid expansion in the range and quality of services and events it offers. Most of these have been developed in conjunction with a number of preferred suppliers, including PKN, Exhibitions & Trade Fairs, FFWCRC and RMIT.

True Synergy has been contracted to supply a secretariat and operations support services, headed up by Vicki Callaway.

To assist in taking the APPMA to the next level, Denni Egan has joined the True Synergy team with a full-time APPMA focus. In her role she will work closely with Moran and the Board to ensure the APPMA continues to deliver value and remain relevant to the growing number of members and the wider industry.

"Denni's expertise and experience in relation to event management, administration and communication along with her highly organised and friendly manner makes her a welcome and valuable team member," Moran said. "Other than kicking goals at work, Denni also plays Aussie Rules and is a die-hard Western Bulldogs fan."

Moran said the past 18 months has seen the APPMA-owned flagship AUSPACK trade show continue to show steady growth, with the 2021 event already over 50 per cent sold. The 2019 edition was boosted by the launch of the inaugural Business & Industry Conference, the return of the industry-focused Awards of Excellence and gala dinner, he noted.

"Alongside AUSPACK, we have increased member marketing and publication opportunities, expansion and growth of member and industry networking events, and improved member engagement/communication programs," he said.

"The opportunities available to the APPMA to develop new events and services to support members and the broader industry continue to be explored, and with the addition of Denni to our team, we are now well placed to deliver further value," Moran said.

EDUCATION DRIVING OUR INDUSTRY INTO THE FUTURE

With the bushfire disaster, flooding and the coronavirus causing industry disruption, the APPMA has opted to focus on things well in the control of Australian businesses, and facilitating access to ongoing education for the packaging and processing industry remains a major goal.

To this end, APPMA is proud to announce the launch of the first APPMA Masterclass Education Series. The Margin Rescue Masterclass, led by director of Margin Partners Paul Allen, is a one-day interactive workshop designed to equip delegates with the skills and toolkit they need to materially improve customer profitability.

The first three sessions will take place as follows:

- Melbourne, 20 April
- Sydney, 4 May
- Brisbane, 18 May

The APPMA Board is exploring other educational opportunities, so stay tuned for announcements on the website at www.appma.com.au/events

APPMA PARTNERS WITH HORT CONNECTIONS 2020

Hort Connections is the largest annual horticulture event in the southern hemisphere, inclusive of an internationally recognised trade show and speaker programme. It provides an opportunity for networking, education and business for the entire fresh produce industry, an industry in which APPMA members are involved as demonstrated at the 2019 show in Melbourne, with many APPMA members exhibiting and many more attending as visitors.

Announcing APPMA's partnership later this year with Hort Connections 2020 (HC20) in Brisbane, chairman Mark Dingley said, "Not only does this partnership provide the opportunity to support our exhibiting members, it also serves as a great platform to acknowledge and promote all of our APPMA members as well as the upcoming AUSPACK 2021, Australasia's all-encompassing food, beverage and pharmaceutical packaging and processing exhibition."

The partnership with HC20, Dingley explains, is "evidence of the APPMA's long term commitment to continue to deliver increased value and support to its members".

The HC20 conference theme *Sustaining the Future of Fresh*, will look at the many ways the industry can help producers to grow more with less. Whether it be through technology, labour solutions, or just general financial and environmental sustainability, HC20 will highlight and showcase exciting new possibilities set to shape the industry.

APPMA GM Michael Moran is the curator of the partnership and strongly encourages all "APPMA members to explore the value of exhibiting or attending Hort Connections 2020".

"When registering as an exhibitor or visitor we ask that members note they are APPMA industry affiliated which will help track and assess attendance as well as provide partnership benefits that can be utilised for additional member support services," Moran says.



CRAFT BREWER OPTS FOR ALL-IN-ONE FILLER

4 Pines Brewing Company will soon be putting its famous beer into bottles and cans on a new filling line, to be supplied by Foodmach, at its Brookvale facility.

Chris Willcock, chief brewer at 4 Pines Brewery, said cans are an increasingly relevant section of the craft beer market. "They're a vessel very well-suited to a variety of drinking occasions," he said. "The challenge at Brookvale has been our restricted space, which makes it impossible to build a second packaging line exclusively for standard and sleek can filling. Off-site filling was an option, but it's expensive and elevates our risk of problems with product quality."

The 4 Pines Brewery is due to start up its GEA Vipoll All in One filler in September. The machine is a combined rinser/filler/capper/seamer in a single monoblock. It can accommodate carbonated and still beverages – either hot or cold – and it can fill glass, PET, and cans in several formats. The filler can work at a pace of up to 30,000 containers per hour. It also has the potential to reduce the energy used in bottling and canning beer and reduce water use.

Foodmach designed a medium-speed packaging line around the filler. This packaging line includes a new bottle/can depalletiser; traceability and inspection systems; conveying; and a line control system to link all existing equipment.

ONROBOT EXTENDS ITS GRIP

Danish robot equipment producer OnRobot has added a new end-of-arm tool to its product line-up, the 3FG15 three-finger gripper with a 150mm stroke.

The new gripper can handle heavy-payload machine-tending applications that require high precision and flexible handling.

Enrico Krog Iversen, OnRobot CEO, said the 3FG15 was developed as a response to existing pneumatic three-finger grippers that are bulkier and less flexible.

"We have long defined the market for electric parallel grippers with the RG2 and RG6 series, and we look forward to addressing new market segments and applications with a new three-finger gripper that allows users to deploy applications faster even with highly accurate, fixed positioning," he said.

The 3FG15 gripper has a maximum stroke of 150mm that can handle multiple processes.

The three-finger design with a 15 kg payload provides a strong, stable grip for both form fit (internal) or friction fit (external) gripping.

OnRobot said the gripper's design, specifically developed for machine-tending tasks, automatically centres workpieces, resulting in a strong, stable grip and precise placement in machine chucks.

The gripper can handle packaging and palletising applications. It is compatible with any major collaborative or light industrial robot arm through OnRobot's new One System Solution, the platform that provides a unified mechanical and electrical interface between the robot arms and any OnRobot end-of-arm tooling.

OnRobot is represented in Australia through its distributor partners: APPMA members Australis Engineering, Diverseco and Scott Automation and Robotics, as well as Mobile Electrics, Collaborative Robots Australia and Auto Controls Systems.



APPOINTMENT: NEW MD FOR OMRON OCEANIA

Global industrial automation company Omron has appointed Henry Zhou as managing director for its operations in the Oceania Region.

Zhou, who is currently general manager of Omron Oceania (Australia and New Zealand), will take up the new position from 1 April this year.

He succeeds current Omron Oceania MD Greg Field, who is retiring after 17 years in the role, and 28 years with the company.

Zhou joined Omron in 1998 in Singapore before he moved to Sydney and has held several leadership roles with the company.

Zhou said he is "honoured to lead Omron Oceania into the next decade through its next phase of growth".

"Today, we are on the doorstep of the 4th Industrial Revolution. It will change the world fundamentally," he said. "This exciting new era presents outstanding opportunities for a broad range of industry sectors."



AUTOMATED LABELLER DELIVERS HAND-CRAFTED LOOK

The Mozart Distillerie needed a labeller that deliberately produces creases. What for most beverage producers is a no-no was one of the paramount requirements of the Salzburg distillery. The label, made of aluminium-coated paper foil, is required to fit snugly around the spherical container – and to look as if it had been applied by hand.

Hitherto, Mozart Distillerie had been using what was a 30-year-old labeller from a customised-machine manufacturer, which plant manager Friedrich Guggenberger had progressively individualised over the course of time with numerous design enhancements of his own. But the output no longer sufficed – and Mozart Distillerie was looking for a partner to jointly develop a new machine. Krones fit the bill.

The results are a combination of features for

precise container positioning, several inspection systems, and a multiplicity of technological customisation improvements.

For labelling, Krones deployed a combination of one cold-glue and one wrap-around Controll labelling station, and pressure-sensitive body labels are applied to a sloping area. For affixing the foil, Krones developed a patented combination of a servomotor that turns the bottles, and linear motors that in twelve press-on operations use sponges to carefully press the foil onto the containers. In order to ensure that the closure cap is correctly positioned as well, Krones has specially developed a guide rail that uses the sloping label area as an orientation reference point. The new line is currently dressing around 5000 bottles per hour, with an option to increase the output to 9000 bph.



BOSCH PACKAGING TECHNOLOGY IS SYNTEGON

Bosch Packaging Technology has changed its name to Syntegon, and it will continue to provide processing and packaging technology to the food and pharmaceutical industries.

And, here in Australia, APPMA member Nupac will continue to be Syntegon's partner, providing its customers with processing and packaging solutions.

Peter Pontikis, Nupac owner, said his company's relationship with Bosch extends back to 1987.

"At Nupac, our partnership with a client begins by getting to understand their unique requirements. The partnership is then maintained by tailoring a solution and continues beyond the lifecycle of the equipment supplied," Pontikis said.

Separately, the Kliklok division of Syntegon is represented in Australia by APPMA member PerForm Packaging Solutions, headed up by Chris Baudinette.

Syntegon's name change comes after Bosch's parent company sold its packaging technology division to Luxembourg-based private equity firm, CVC in July last year.

TOMRA UNVEILS SORTING MACHINE

Tomra Food, which makes sensor-based sorting solutions for the food industry, showcased a new sorting machine at the recent Fruit Logistics Berlin, the Tomra 5B. The machine is suitable for potatoes, fruit, and fresh-cut produce.

Michael Picandet, head of Tomra Food, said Tomra's new sorting machine and the Curo8 filling system would help food producers and packhouses enhance efficiency and profitability while ensuring food quality and safety standards.

"These are important new additions to Tomra Food's product line, which offers sorters and graders of many different types and sizes," he said.

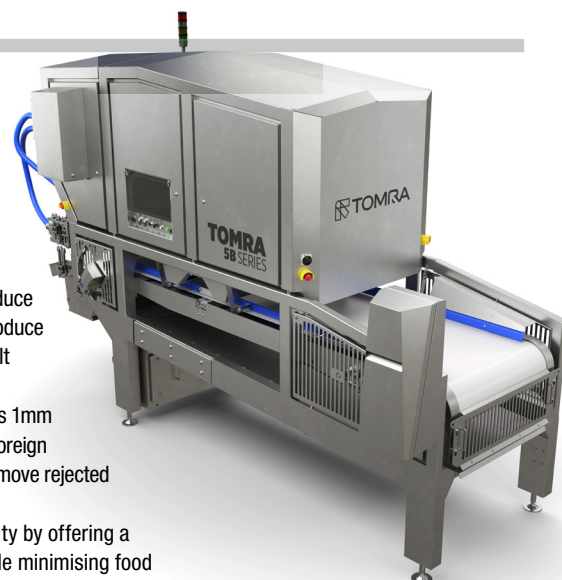
Tomra said its new 5B sorting machine is designed to remove small foreign materials from lines of fruit or vegetables and allow the operator to easily adjust sorting criteria to the required food quality, eliminating the

unnecessary disposal of usable produce.

The 5B comes in four frame widths, from 800cm to 2000cm and operates at belt speeds of 2-5 metres per second. As the produce moves along the belt, foreign material and produce imperfections are detected by up to six on-belt cameras, a laser, and an off-belt camera.

The cameras can detect defects as small as 1mm and the laser can detect up to 99 per cent of foreign material, Tomra claims. High-speed air jets remove rejected objects from the line.

The new machine gives operators flexibility by offering a broad range of easy to control settings, while minimising food waste to improve yields and profitability.



Unlocking the power of AI

Deep learning and machine learning are driving manufacturing efficiency.

The history of the manufacturing industry is the history of technological revolutions. New machines, new innovations, and now, ever-increasing computing power continue to change manufacturing. Machine vision, coupled with artificial intelligence and deep learning, is one such innovation.

Industrial technology research firm ABI Research has released a report analysing the uptake of new technology, specifically deep learning, in the manufacturing industries. The report, *Machine Vision in Industrial Applications*, is part of the company's artificial intelligence and machine learning research service, which includes research, data, and analyst insights.

Machine vision systems are a staple in production lines for barcode reading, quality control, and inventory management, according to the report. It's a mature technology with established incumbents, but advances in chipsets, software, and standards are bringing deep learning into the sector. Deep learning is a subset of artificial intelligence where networks and layers of algorithms are created without human intervention. Each layer provides a different interpretation of the data it feeds on.

According to the report, total shipments for machine vision sensors and cameras will reach 16.9m by 2025, creating an installed base of 94m machine-vision systems in industrial manufacturing. Of that, 11 per cent will be deep learning based.

Lian Jye Su, principal analyst at ABI Research, says these solutions often have long replacement cycles and are less prone to disruption. "Due to the increasing demands for automation, machine vision is finding its way into new applications," he says.

"Robotics, for example, is a new growth area for machine vision; collaborative robots rely on machine vision for guidance and object classification, while mobile robots rely on machine vision for SLAM [simultaneous localisation and mapping] and safety."

Deep learning-based machine vision is data-driven and uses a statistical approach in processing the data. This approach allows the machine vision model to improve as more data is gathered for training and testing.

Chipset vendors are launching new chipsets and software stacks to facilitate deep learning-based machine vision. According to the ABI report, Xilinx, a field programmable gated array (FPGA) vendor, partnered closely with camera sensor manufacturer Sony and camera vendors such as Framos and IDS Imaging to incorporate its Versal ACAP System on Chip (SoC).

Intel, on the other hand, offers OpenVINO for developers to deploy pre-trained deep learning-based machine vision models through a common API to deliver inference solutions on various computing architectures. Another FPGA vendor, Lattice Semiconductor, focuses on

low-powered artificial intelligence for embedded vision through its senseAI stack, which offers hardware accelerators, software tools, and reference designs. These technology stacks aim to ease development and deployment challenges and create platform stickiness.

On the standards front, vendors are bringing 10GigE (Gigabit Ethernet) and 25GigE cameras into industrial applications. Continual upgrades on video capturing and compression technologies also generate a better image and video quality for deep learning-based machine vision models. This, the ABI report says, ensures the future-proofing of machine vision systems.

"Therefore, when choosing machine vision systems, end implementers need to understand their machine vision requirements, consider integration with their back-end system, and identify the right ecosystem partners," Lian Jye Su says.

"Deployment flexibility and future upgradability and scalability will be crucial as machine vision technology continues to evolve and improve."

Deep learning is a subset of artificial intelligence where networks and layers of algorithms are created without human intervention.





LEFT: Drew Hoxey (second from left) is Axelent sales director, Australia and New Zealand.

BELOW: Axelent Australia specialises in industrial safety barriers.

Axelent Australia on the ascent

The past year has been a busy one for safety systems manufacturer Axelent Australia. The company moved into a new facility, it is hiring new staff, and bringing new products to market.

Axelent makes equipment that deals with the safety side of manufacturing, distribution and storage. It makes barriers that can go around hazards, manages pedestrian traffic, keep products secure in locked enclosures, or protect facilities and products from forklift damage. Axelent Australia offers a complete safety concept for the Australia and New Zealand markets.

Drew Hoxey, Axelent's national sales director for Australia and New Zealand tells *PKN* that the move to the new, 1400-square-metre facility doubled Axelent's storage capacity after the company relocated about 18 months ago.

"In our old facility, the packaging and despatch business was working at 110 to 115 per cent capacity," Hoxey said.

"After moving into the new facility, and having modern pallet wrappers, the workload for the guys came down to around 60 per cent. This is

mostly because the workspace was more user friendly, and everything they need is ready at hand. These efficiencies have given us a lot of room for growth in productivity."

SCAN IT IN

More productivity gains are also on the horizon. Hoxey said in the coming three to six months everything in the warehouse would be electronically scanned on and off the pallets. "This will optimise stocking, and also ensure everything turns up to a site exactly as ordered," he said.

Another bright spot for Axelent Australia has been sales volumes, which have been on the rise.

"Our sales have, in the past two years, gone up by about 80 per cent," Hoxey said.

"So, to help keep the upward sales trending going, we put on two new business development managers – one in New South Wales (Rob Quinn),



and one in Victoria (Matthew Peacock). They both took up their roles in December.

Hoxey said the company is also looking to hire a business development manager in Queensland.

"The idea behind creating these roles is to have local representation in the areas to not only grow sales, but also to give back-up and support to our customers," he said.

NEW PRODUCTS

Hoxey said the company is developing a detachable door that can be moved completely away from its opening.

"The door is mounted on a platform with wheels, which is fully removable. So, you can detach the door from its hinges, and then you can wheel it to wherever you want to store it," he said.

"One of the advantages to having a detachable door is you only need a small amount of space to take it off and wheel it somewhere. With conventional doors, you need an area for it to swing open, or somewhere for it to slide into.

"The idea behind the detachable door is that you can have a maximum opening with a minimum amount of fencing," Hoxey said.

Safety and security are important in any operation. Axelent Australia is continuing to deliver innovative barrier solutions that help industry stay safe and secure.

"One of the advantages to having a detachable door is you only need a small amount of space to take it off and wheel it somewhere."

— Drew Hoxey

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Clean plate club

When Integrated Packaging needed an efficient plate cleaner for its flexible packaging printing operations, it set out searching for the ideal solution, and settled on a Flexo Wash Plate Wash system, distributed in Australia by Jet Technologies.

AS part of the production process, Integrated Packaging [IPG] prints onto its flexible packaging for its customers. Increased demand for high-quality, eight-colour printed graphics on fresh food packaging has led IPG to install an additional new wide web flexographic press to expand printing capacity at its Recency Park plant in Adelaide.

IPG uses flat top photo-polymer plates in the printing process. However, to guarantee consistent quality of the flexible film printing, the company needed to invest in the right plate-cleaning equipment.

Cleaning plates is an important part of the printing process. It helps maintain consistency in printing quality. When plates aren't cleaned properly, it results in lower quality printing, and, potentially, reprinting. Using older equipment and processes, cleaning could take an average of half an hour per plate. With 250-300 plates to clean per month, this was a sizeable time investment.

THE SOLUTION

IPG chose the Flexo Wash Plate Wash PW82WR. This piece of equipment is manufactured in stainless steel and designed with the following features and benefits in mind:

- easy loading of the plates by a speed adjustable conveyer belt;
- gentle cleaning process for all types of ink;
- user-friendly technology;
- minimum maintenance;
- sturdy construction with long life-time of the equipment; and
- environmentally friendly cleaning liquids.



Importantly, the plate wash system also cleans all types of ink without wear and tear of the plates.

IPG had previous experience with Jet Technologies' equipment. It installed the Flexo Wash Anilox Cleaner three years ago. IPG's experience was a key consideration in its search for a plate-cleaning system.

KEEPING UP WITH VOLUME

Another key factor for IPG when considering new cleaning equipment was that the machine would be used every day and would need to be able to handle a high volume of plates. IPG needed equipment that could keep up with the high usage and still perform well.

Darryl Wilson of Jet Technologies said the Flexo Wash can perform at

the same high level every day, and so is well suited to IPG's needs.

"The average processing time of the Flexo Wash PW82WR is only three minutes per running plate metre, significantly reducing IPG's cleaning times, which in turn improves the efficiency and productivity of operations," he said.

The quick and gentle cleaning process is fully automatic and leaves the clean and dry.

WASHING TOWARDS THE FUTURE

The Flexo Wash was integrated with IPG's existing daily operations, with no disruptions to IPG's printing operations and productivity.

Jet Technologies provided training to integrate the new equipment seamlessly into IPG's existing operations.

IPG plans to continue building the business into the future, with this investment demonstrating the long-term commitment the company has made to the flexible packaging industry.

IPG is part of Pro-Pac Packaging, which acquired the business in 2017. IPG makes agricultural and industrial packaging, specialising in films and plastics. IPG provides blown film, flexographic printing, slit/rewinding, and converted bags for fresh produce applications. ■

The average processing time of the Flexo Wash PW82WR is only three minutes per running plate metre."

— Darryl Wilson,
Jet Technologies

Peter Marshall,
IPG, with the
Flexo Wash Plate
Wash PW82WR.

Transformative technology



At the upcoming interpack trade fair, a number of Australian exhibitors, principals and partners will be showcasing trendsetting, transformative technology for the packaging and processing sectors.

AS we go to press on this issue, concern over the coronavirus disrupting major global events this year continues to rise. At the time of writing, there is no change in status for interpack, scheduled for 7-13 May at the Messe Centre in Düsseldorf. Mindful that this situation might change while the magazine is on the press, PKN has taken the view that the technology previews exhibitors have shared with us are worth writing about regardless of when they will be showcased.

SUSTAINABLE PACKAGING SOLUTIONS FROM KRONES

Krones (hall 13, stand A7) will show its LitePac Top secondary packages, a cardboard clip for non-returnable PET containers or cans. During the production process, the LitePac series scores highly in terms of lower energy consumption and less wastage than with shrink-packs, according to Krones. An added benefit, Krones says, is that it's possible to

selectively orientate the cans so as to ensure prominent placement of the brand logo, for instance, or to form a consistently harmonised motif from several different can designs. The packaging used in LitePac Top can be produced from recycled materials, and after consumption, can be recycled again.

LitePac Top can be handled using the Varioline 2M packer. The Varioline series offers maximised flexibility with a combination of secondary and tertiary packaging. In all, more than 20 different packaging combinations can be created on a single machine. By using encapsulated, lifetime-lubricated bearings, electric vacuum pumps or a drive system where the braking energy is recovered and re-used for acceleration, the Varioline marries sustainability, efficiency and cost-effectiveness.

NEW DIGITAL TECHNOLOGIES FOR MORE FLEXIBILITY

As demand grows for faster, variable and sustainable manufacturing,

highly flexible machines and consistently efficient processes are necessary. Schubert (represented in Australia by Selpak) says it already offers an advantage with the modular design of its TLM systems, which it is continuously advancing by developing new robots and digital solutions. At interpack, the packaging machine manufacturer will demonstrate the flexibility of its high-performance technology with its new collaborative robots (cobots) and pick & place robots (hall 14/stand D01).

Schubert is developing a comprehensive system for its new cobot modules. It includes an intelligent and easy to configure control system, a vision system that allows it to perceive its environment, feed belts, format parts and much more with the help of artificial intelligence. Each Schubert cobot requires no more than the space needed for a table with boxes and one or two people. A prototype of the cobots can be seen live and in action at the exhibition stand.

For higher performance in a small space or more mobility in product handling, Schubert's specialised T4 and T5 robots provide a solution. They complement the proven F4 robot, which is used in numerous picker lines from Schubert. The design of the new pick & place robots is based on the well-known delta robot type. Their compact rectangular working area makes enables high performance in the smallest of spaces: Up to six of the new four-axis T4 robots can work simultaneously in a single TLM frame. The T5 variant offers a completely different – and also new – option for machine processes. It has a fifth axis with which products can be pivoted and tilted. At the Schubert stand, a compact picker line will show how effective and flexible the new robot type can be. The machine processes both plastic trays and cardboard trays.

INNOVATION STATIONS HEIGHTEN EXPERIENCE

Heat and Control (hall 14, stand A51) will display its latest technology and innovative solutions for the food

ABOVE: Light on the environment: LitePac series from Krones

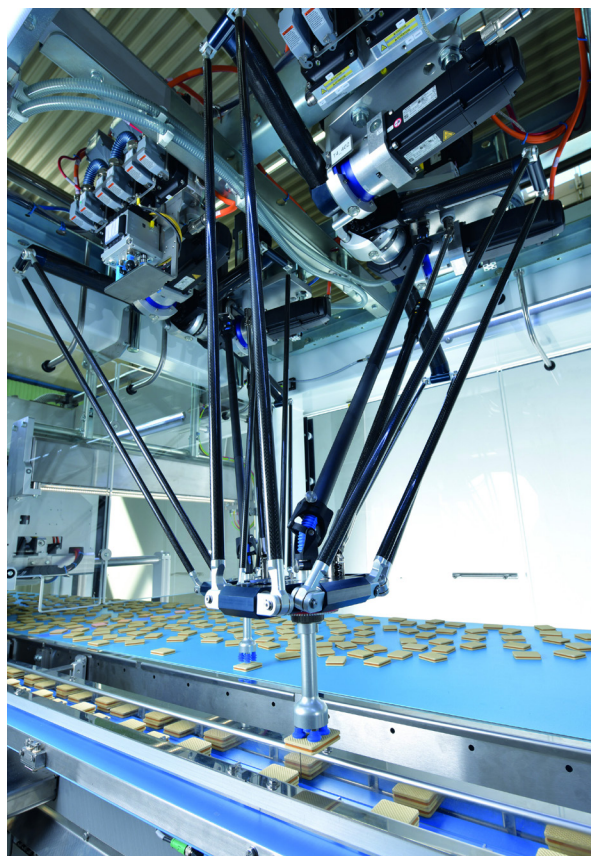
manufacturing industry. A number of new products will be on show and innovation stations will provide visitors with the chance to experience and engage with the technology.

A highlight on the stand will be the company's FastBack Revolution On-Machine Seasoning (OMS) System. According to Heat and Control, visitors will have the chance to see how innovation in design and application are transforming product handling in the industry.

The FastBack Revolution (OMS) System combines the top-quality performance of its patented dynamic AccuFlavour Tumble Drum, the efficient Modular Dust Collection System and the advanced FastBack Model 260E-G3 into one compact, cost-efficient unit designed to ace seasoning challenges at the weigher segment of production.

Visitors will have the chance to see how innovation in design and application are transforming product handling in the industry."

— Heat and Control



High performance in tight spaces:
Schubert's T4 pick & place robot



» www.natec-network.com

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**Let's talk at Interpack
Stand 5E24**



KHS has added a new can packaging system to its packaging portfolio.

“A revolution in seasoning flexibility that can quickly meet consumer trends and allows a manufacturer to create new products, the On-Machine Seasoning (OMS) application method is proven to provide the industry’s most efficient and uniform coverage,” Heat and Control says. “It offers significant savings and flexibility by applying seasoning to products just before they enter the weigher, which creates opportunities to respond to seasonal campaigns and trending flavour demand.”

Other benefits, according to the company, are that it allows increased production time and provides maximum efficiency and sustainability via less energy usage, less space and less material usage. With sustainability a trending issue for industry buyers, interpack presents an optimum time to showcase this equipment.

CAN PACKAGING SANS SHRINKFILM

A new can packaging system will form the centrepiece of the KHS booth (hall 13, stand A31). KHS says

this format can replace the shrink film used to package multipacks of 12 or 24 containers for transportation. The first phase in this new project has been completed successfully in partnership with a multinational beverage producer. With this development KHS says it wants to help its customers to save more CO₂ in the production process and the packaging itself and so reduce their overall ecological footprint.

The new development for cans sits alongside KHS’s tried-and-tested Nature MultiPack, an eco-friendly system with a carrying handle that completely does away with the need for shrink film by holding the

containers firmly together with easy-to-remove dots of adhesive.

“As a specialist for packaging equipment we’re constantly developing our systems and solutions with the aim of saving on materials and providing efficiency in operation. Here, we take all packaging materials into account – whether these be plastic, cardboard or paper,” says Dr Johannes Grobe, CSO for KHS.

TNA SET TO DELIVER ‘THE PERFECT BITE’

Food processing and packaging solutions provider tna (hall 14, stand C56) will showcase its ability to meet growing demand for convenient, healthier, clean label foods, with bold texture and taste profiles via its complete processing and packaging solutions, the company says.

From high-speed moguls, oiling and sugar-coating systems for confectionery, to flexible conveying, seasoning and high-performance packaging technology for a range of snack applications, visitors will be able to experience on-stand demonstrations of some of tna’s most advanced technology. In addition, tna experts will be on-hand to explain how the company’s my-tna 360 support programmes can help to ensure the best return on investment possible.

Included in the line-up will be an advanced vertical form fill and seal (VFFS) system, the new tna robag 3e. With fully integrated real-time communication software and smart diagnostics, the system takes control sophistication to an unprecedented level, says tna.

BELOW:
Advanced VFFS
with smart
diagnostics:
tna robag 3e



We’re constantly developing our systems and solutions with the aim of saving on materials and providing efficiency of operation.” — KHS



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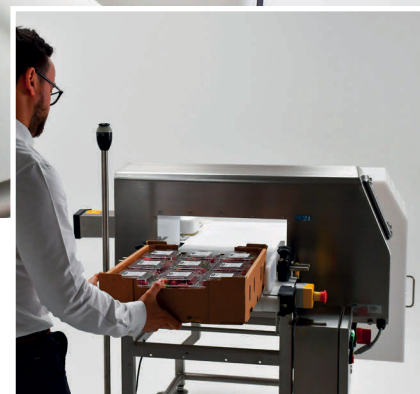
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Multi-spectrum Advantage

Ceia's innovative technology uses multiple frequencies simultaneously - they can increase sensitivity, reduce false rejects and detect thin metal fragments no matter the orientation or direction.

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BENCH BREAKING ENGINEERING

Global packaging and processing specialist group Natec Network (NN) will be showcasing its bench breaking engineering (or benchineering) capabilities at interpack (hall 5, stand E24).

Benchineering is a term coined by NN to describe the multidimensional approach that ties together the skills, experience and capabilities related to addressing plant, process and product needs within the NN group, and allows it to deliver service that exceeds a customer's predetermined benchmarks, and optimum value creation.

"With the benchineering approach, customers receive our expert support regardless of the stage of their business case and of their position in the industry. No matter if it is renovation or innovation, streamlining or expansion, well established producer or newcomer, we aim to ex-

ceed their needs and desires," says Thomas Haas, MD at Hochland Natec / NN.

On the stand at interpack, Australian cooking equipment manufacturer Gold Peg will be joined by fellow member Natec [made up of Hochland Natec (Germany) and Natec (USA)] – both established machinery and plant engineering specialists for the industrial food production sector.

Natec specialises in filling and forming equipment for processed cheeses, including SOS (slice on slice – food service industry) and IWS (individually wrapped slices – retail).

On show at interpack will be Natec's FreeSlice and FreePack, which are intelligent, purpose-designed IWS and SOS forming and filling lines operating with high accuracy and minimal waste. According to Natec, the machines



With the benchineering approach, customers receive our expert support regardless of the stage of their business case."

— Natec Network

deliver well-shaped product; smooth production; minimised operation costs and wear and tear; and maximum pack off – accurate weight control, no trims, and reduced waste.

COOKING UP A GOOD DEAL

Upstream from the Natec cheese forming and packing lines is the processing equipment, Gold Peg's area of speciality. Gold Peg designs, manufactures (in Australia), and installs direct steam injection cooking equipment that optimises production efficiencies and processes consistently high-quality end product in facilities around the world. Gold Peg cooking equipment is suitable for all products that can pass through a pump, such as processed cheeses, sauces, baby food, meat products pie filling and petfood, including products with particles up to 10mm in diameter.

Among the core products on show from Gold Peg will be batch cookers that address a wide range of cooking needs. The RotaTherm continuous cooker range offers versatility and accurate control over the cooking process for each product, which, according to Gold Peg, means lower ingredient costs; more consistent product thanks to better performance from fillers; less waste; and more profit due to centre-lining and on-spec production.

Also from Gold Peg, FreeTherm is for general cooking requirements with twin auger mixing, while ShearTherm delivers high shear cooking and mixing – to create smooth spreadable products with a



LEFT: Offering versatility and accurate control: The Gold Peg RotaTherm continuous cooker.

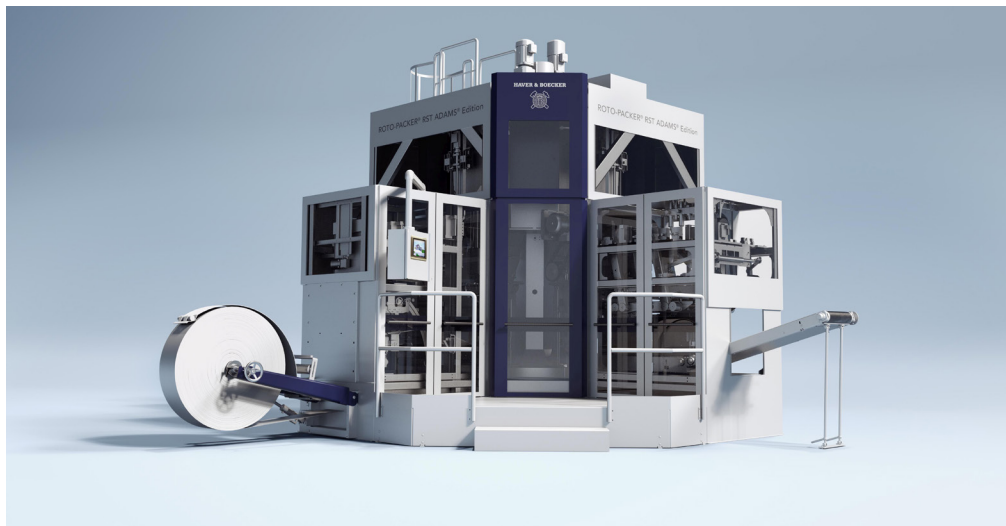
OPPOSITE: The new Roto-Packer RST ADAMS edition is specially designed for filling powder-type building materials and minerals into watertight, sustainable PE bags.

ABOVE: Individually wrapped sliced cheese by Natec's FreePack system.

great mouthfeel (in part due to smaller fat globules).

Gold Peg will highlight new technology for fast efficient production of smooth emulsions in seconds – without recirculating or any electrical load.

At interpack, and later this year at foodpro in Australia, NN is also promoting what it calls a 'two-for-one' special offer: by purchasing a relatively low cost line adaptation made by Gold Peg, processed cheese manufacturers who are already using RotaTherm equipment can now gain access to the growing pizza cheese market. The add-on module integrated with existing processed cheese equipment enables the production of pizza cheese, mozzarella, and pasta filat varieties. Of course, new RotaTherm adopters will gain access to a line that can produce both processed and pizza cheese.



KEEP YOUR POWDER DRY

A key exhibit for Haver & Boecker Machinery Division (hall 12, stand A27) will be the new Roto-Packer RST ADAMS edition. The four-spout packer is designed for filling powder-type materials and minerals (both industrial and food) into watertight, sustainable PE form-fill-seal bags.

According to Haver & Boecker, the system ensures clean filling

into tear-resistant, reclosable bags. This means the packaged product is safely protected even under adverse storage and transport conditions. It also offers longer storage stability and extended shelf life for the filled product. Product loss during filling, storage and transport is reduced. Less product ends up being used, which leads to significant reductions in energy consumption and CO₂ emissions. ■

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PHOTO: MELANIE STREICH

Beverage boost

Ahead of the interpack trade show, Melanie Streich takes a closer look at the burgeoning beverage sector and the packaging technology driving and supporting its growth.

THE prospects for the global beverage industry are excellent, as data provided by Euromonitor International and the VDMA Food Processing and Packaging Machinery Association shows. According to this data, 947 billion litres of beverages were consumed globally in 2018. By 2023, the demand is expected to increase even further – by 16.3 per cent to over one trillion litres (1,101 billion litres).

Alongside consumption growth, consumer demands regarding the quality and sustainability of products and packaging have increased. Consumers are both well-informed and sensitised. When selecting products, they tend to make more conscious decisions and attach greater importance to ingredients and their origins, and the sustainability status of their packaging.

The increase in out-of-home consumption and the desire for more convenience has led to a rising

demand for individual beverages in light-weight packaging and smaller batches. Furthermore, the share of consumers that belong to the 50+ generation is higher than average in the field of beverages. In future, this 'silver generation' will become more and more important as a target group for beverage suppliers. Low-calorie, high-quality and healthy beverages are popular among this group, which also expects packaging to be designed in a way that makes it easy to open and just as easy to reseal.

DEMANDS ON THE INDUSTRY

Flourishing markets invariably promote competition and intensify the pressure beverage manufacturers are already under; these include fluctuating prices for raw materials as well as a considerable price competition in the food retail trade. This calls for energy-efficient, resource-conserving and flexible solutions for a closed circular economy.

The beverage industry needs to be able to react to the continually changing demands of consumers and trade by providing a variety of products in increasingly shorter intervals. This requires continuous, new product modifications as well as new developments, combined with specific marketing measures for different target groups.

In this area, digital printing provides maximum flexibility. Marketing strategies can be implemented overnight, without having to worry about first using up bottle labels currently in stock. The printing process can be used on virgin PET as well as on rPET (recycled PET), and uses inks that can be removed from the PET without any residue during recycling.

The beverage industry as well as the associated process and packaging industries are well positioned to meet these rising challenges, and offer numerous innovations from machine availability, production and process optimisation to the use of digital solutions and Industry 4.0 measures. These will be exhibited at the upcoming interpack, scheduled to take place in Düsseldorf from 7 to 13 May 2020. A total of 1544 exhibitors have confirmed that they will be presenting solutions for the beverage industry – including the latest developments along the entire machine and equipment value chain, from various types of containers to materials and recycling.

SUSTAINABILITY IN FOCUS

Beverage manufacturers and packagers are reacting to customer demands for sustainable products with intelligent technologies, machines and equipment that conserve resources as well as with recyclable materials that can be used in closed cycles.

Global beverage brands, such as Coca-Cola and Pepsi, are banking on sustainable raw materials and one hundred per cent recyclability when it comes to primary and secondary packaging. By 2025 – 2030 at the latest – Coca-Cola, for example, aims to return one item of packaging



PHOTO: COCA-COLA GERMANY

to the recycling cycle for every item of packaging that is brought to market. The company also plans to make every bottle fully recyclable.

In 2019, the beverage giant presented the first sample bottle, which is made of 25 per cent food grade ocean plastic. During this partner project between Ioniqa Technologies, Indorama Ventures, Mares Circulares (Circular Seas) and the Coca-Cola Company, an initial 300 bottles have been produced, with the aim of illustrating the potential of “enhanced recycling”.

According to company statements, this innovative method is to ensure that in future, used plastic – regardless of its quality – can be turned into high-quality plastic.

HOLISTIC RECYCLING

The Krones group's MetaPure recycling facilities are one example of

enhanced recycling technologies. These facilities can recycle between 150,000 and 200,000 tonnes of PET bottles per year – in various material qualities, including food grade PET. The objective is to ensure that beverage bottles and other plastic packaging can be recycled completely, including their materials.

Krones subsidiary Dekron presents another successful example: the DecoType Select direct printing machine. The machine can print on containers made from 100 percent rPET using ink that can be removed from the PET without any residue during recycling.

100 % RPET

At the end of 2019, German packaging system provider KHS first presented its packaging development that focuses on the entire life cycle to the public. The aptly named



PHOTO: MATTHIAS JESERER, KRONES AG

MAIN: As the selection of available beverages increases, machines and equipment are expected to be more and more flexible.

ABOVE: Dekron's DecoType Select can print on bottles made of virgin PET as well as rPET.

BELOW: Coca-Cola bottle made out of ocean plastic.

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Beyond Juice is a new bottle development for sensitive beverages such as fruit juices. The recyclable PET bottle is made out of 100 percent recydate and is equipped with the FreshSafe PET barrier solution. This ensures that fruit juices and spritzers have an up-to-ten times longer shelf life compared to uncoated plastic bottles. A wafer-thin glass coating makes this possible, preventing oxygen from entering the bottle and carbon from escaping.

"Beyond Juice is more than just a fruit juice bottle; it is our tangible answer to the challenges the beverage industry currently faces. In light of the current discussion on plastics, environmentally friendly and practical solutions are becoming more and more important," says Philipp Langhammer, product manager Barrier Technology at KHS Corpoplast.

The label area is particularly small; this allows sorting facilities to identify bottles as PET bottles and thus recycle them without problems. The right glue furthermore ensures that labels can be removed easily, and prevents contamination during the recycling process.

When sold in batches such as six packs, no foil is used; instead, the bottles are held together by glue dots, which can be removed easily during recycling. "By eliminating the surrounding foil, we have further reduced packaging waste by up to 90 per cent," says Langhammer.

PHOTO: KHS GMBH



ENERGY EFFICIENT PLANTS

Sustainable product solutions need smart production processes that increase energy efficiency during production, lower carbon emissions in the long term and reduce material and resource consumption. Digital interconnectivity and monitoring help optimise product quality and plant availability.

Next generation bottle fillers, for example, require up to 20 per cent less energy, and at the same time reduce carbon emissions by up to 50 per cent – all thanks to optimised vacuum pumps.

"We have installed pressure sensors in every single filler valve. These sensors seamlessly identify any deviations from set values as well as breakages," says Manfred Härtel, product manager Filling at KHS, explaining the automated processes used in the Innofill Glass DRS bottle filler.

A camera-assisted controller monitors the high-pressure injection system and regulates the development of foam, which in turn reduces product losses by up to 50 per cent. The use of process warmth combined with a lower water consumption during cleaning also have a positive impact on the machine's energy balance and reduce production costs.

AI AND AR

The Ende group has introduced the prototype of a self-learning filling valve. Aided by artificial intelligence, the valve is expected to optimise production process while at the same time significantly reducing



PHOTO: KHS GMBH

operating and maintenance costs. Cyber-physical systems allow the valves themselves to find the best way to fill a specific container with a certain beverage – in the most efficient manner possible.

Krones has introduced augmented reality support for plant operators. This option uses smart glasses, which give the support specialists virtual, on-site access. However, Krones is banking on prevention to ensure that one day, downtimes will be a thing of the past. The data-based system can identify and resolve weaknesses in the production process at an early stage. Support specialists continuously monitor the production process; they access the machine's data from the outside, notify users of emerging problems in due time and guide plant operators through the troubleshooting and resolution process.

Innovations like these, and the many others that will be exhibited at interpack 2020, prove that smart factories are no longer visions of the future but are already a reality today.

We do not need a crystal ball to predict that cyber-physical systems (CPS) will dominate the future of beverage production. Unaided by humans, these systems independently control production and processes, share information and plan and trigger actions independently. Apart from impacting a company's production processes, we can expect this new technology to include partners, suppliers, warehouses and customers, which will all be connected to one another. ■

ABOVE LEFT: Beyond Juice bottles are also available in foil-free batches. The Nature MultiPack™ packaging solution holds the bottles together using easily soluble yet powerful glue dots.

ABOVE: A camera controls the impact of bubbles and foam during the bottling process, which helps prevent product losses.

20%

**less energy is
required for next
generation bottle
fillers.**

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Sea change

When it comes to sustainability in beverage packaging, consumer sentiment has changed dramatically. The ground beneath beverage packaging producers is shifting, and many are shifting along with it, making investments into recycling facilities, and innovating new ways of packaging drinks. Ian Ackerman reports.

MANY producers have taken hard looks at the full value chain and are now taking decisive action to make their businesses and products more sustainable.

The beverage packaging industry is in the midst of a sea change, where consumers are demanding recyclable, recycled, and convenient beverage packaging. And this has set up a challenge that packaging producers are rising to.

IT STARTED WITH BAGS

This change in consumer sentiment gathered pace after all Australian states and major territories (except New South Wales) banned single-use plastic bags for shopping. Coca-Cola Amatil (CCA) Australian beverages managing director Peter West tells *PKN* that when supermarkets stopped giving out free plastics bags, it made for a dramatic change in the psyche of Australians.

"It is, by far, the most dramatic change we've seen in consumer

sentiment," he says. "So, now if someone buys a bottle, they want to know that it becomes a bottle again, and they want to see solutions."

CCA last year switched to using 100 per cent recycled plastics in its single-serve plastic bottles, meaning seven out of 10 bottles are made of recycled material. West says that switch was part of a strategy to move incrementally to more sustainable packaging.

"Rather than trying to be perfect and get the whole portfolio, we executed what we knew, which was below one-litre, which is seven out of ten of our packs," he says. "The reason we're not using 100 per cent recycled material in our larger bottles, is because of the sheer amount of pressure that is in the bottle – it's equivalent to three times the pressure of your average car tyre."

"This is a good first step, but one of the key things that consumers would ask now is, how do we find a way to change that to a closed-loop solution within the Australian market. We import the rPET today – that is

16,000 tonnes of material that was a bottle before that we make into a bottle again, but we need to turn that into a solution in Australia."

Mal Karmelich, key account director at Tetra Pak, agrees that consumers started looking at packaging differently as a result of the plastic bag ban.

"Our 2019 Tetra Pak index tells us consumers believe we're reaching a tipping point. They see themselves as being directly responsible for the world around them. Consumers are looking to make more informed choices around packaging – they're looking for packaging made from renewable and recyclable materials every time they walk down those supermarket aisles."

But, Karmelich points out, there are two contradictory trends in the market. "On one hand, consumers are demanding convenience and premixing, and we know that they're willing to pay for things that make their lives easier. But these products usually come with more processing and packaging, which is the opposite of the other trend: people are saying they don't want processed food in more packaging, they want things that are as close to natural as possible. It's a paradox, and it's a real challenge for manufacturers."

Geoff Parker, chief executive officer, Australian Beverages Council, tells *PKN* sustainability has risen as a

Packaging converters are responding to consumer demand by moving to rPET alternatives.



priority in consumer sentiment research recently, and beverage companies have responded with ambitious ways to address concerns and to turn sustainability – which includes greater use of recycled material – into not just a unique selling point, but part of a company's DNA.

"Today, much of the industry is manufacturing containers from recycled material, some of which is being supplied through container deposit schemes. In many instances, the recycled content of the average plastic bottle is edging above 50 per cent which is great news and a step in the right direction to support governments in their respective broader waste management policies," Parker says.

"While these initiatives demonstrate positive progress, clearly, there is more work to be done to increase the recycled content of all containers across the industry. The industry must continue to support this recycled content agenda and aim for 100 per cent in the years ahead, helped largely by a better functioning recyclable waste framework which is currently being developed."

AWAY FROM PLASTIC

While plastic recycling is a front-of-mind issue for many consumers and businesses, beverage packaging is also moving in other directions, away from plastic.

Parker says, "It's likely we'll see some niche, and not so niche, packaging made from bio-degradable materials. As manufacturers get to grips with the challenge of creating a more sustainable future, a portfolio packaging mix that involves many material types will almost certainly be part of the solution."

There has also been an uptick in aluminium can production. Orora Packaging, in its most recent half-year results, reported growth in can volumes, which contributed to an EBIT growth of 1.8 per cent in Australasia, despite what the company calls "cost headwinds".

Brian Lowe, Orora's CEO, says, "From a growth perspective, we're seeing that some products transition from other packed formats into cans – whether that be from plastic or even glass. We're also seeing growth

[in demand for cans] within segments, such as craft beer."

Lowe also notes that there has been growth in different sizes of cans, such as slimline cans. "We're also seeing a lot of variety in the products, such as sparkling water in cans," he says. "The growth in the small format cans has continued."

Lowe says, in the Australasian operations, glass volumes were flat over the first half of the past financial year. "Glass volumes were in line with the first half of last financial year, mainly we saw some impact from wine exports. These impacts were partially offset by gains in beer and increases in other beverages such as kombucha," he says. "Over the coming period, I expect our current glass volume to be pretty steady."

In a statement to PKN, Orora says glass and cans both offer an infinitely recyclable option to producers, customers and consumers.

"Increasingly, cans are also viewed as a package that offers purity of flavour, quality of product, and are environmentally sustainable. They also provide new and innovative ways to differentiate products on the shelf, with brand and marketing teams able to maximise advertising space across the surface of the can."

It is not just in traditional beverage markets the market is moving towards cans, for Orora, at least.

"In addition to the growth of carbonated soft drink and water in cans, our global customers are also exploring options for canned wine, caffeinated, and functional health drinks," Orora says.

The importance of sustainability is a rising tide everywhere, not the least in the beverage packaging industry. Many manufacturers and bottlers have made commitments and substantial moves towards more sustainable operations. There are more sustainable materials, and there is a growing emphasis on recycling and reusability. These moves have been generally in response to rising consumer concern, and the result will be a better, cleaner environment for everyone. ■

"Now if someone buys a bottle, they want to know that it becomes a bottle again, and they want to see solutions."

— Peter West, CCA



Lighten up

Against the backdrop of growing anti-plastic sentiment, there's a strong argument for using lightweight plastic packaging for beverages and liquid food products, especially when taking a life-cycle view.

MOST food packaging today – whether it is plastic, paper, or metal – contains plastic components in some form or another. Using plastics for liquid food packaging has numerous benefits. Plastic is lightweight, tough, durable, affordable, and versatile. It has excellent barrier and thus food safety properties. Plastics are light in weight, enabling reduced raw material use in specific applications. This, in turn, results in a low carbon footprint without compromising consumer safety or convenience.

While plastic has come under fire for its visibility in the waste stream, the solution, many experts agree, is not to ban plastics. The solution is to increase the value of plastic and to promote recycling and proper waste management.

A LIFE-CYCLE PERSPECTIVE

Ecolean, a supplier of lightweight packaging solutions, promotes looking at plastics with a life-cycle perspective. The company has partially replaced plastic with chalk – up to 35 per cent in the Ecolean Air and Ecolean Air Aseptic packaging ranges. Chalk has a low climate impact, and it gives the company's lightweight

package its strength, stiffness, and a smooth, white surface, ideal for vibrant printed graphics.

A life-cycle perspective can help the beverage industry focus on the entire environmental impact of packaging, says Ecolean. The company argues that looking only at the end-of-life part of the packaging life cycle might result in brand owners choosing packaging with a larger total environmental impact.

Johnny Sajland, global sales director at Ecolean Group, says “Customers come to us for lightweight packaging solutions, helping them to further reduce their environmental footprint. We have customers promoting a decrease of plastics use of up to

Replacing approximately a third of our plastic use with innovative natural minerals... is a significant step in the right direction.”

— Susanne Rolfe, Tatua

Helping create recycling systems for flexible packaging in local markets is a key pillar of Ecolean's sustainability approach.

70 per cent when switching from another packaging type to ours.

“We help our customers to make well-founded decisions by being transparent about our packaging system's total carbon footprint. Brand owners using lightweight packaging are not only reporting cost savings but also an improved environmental profile, brand image and company reputation among other benefits.”

One such customer is New Zealand dairy processor Tatua. “Replacing approximately a third of our plastic use with innovative natural minerals like chalk is a small yet significant step in the right direction,” says Susanne Rolfe, Tatua GM marketing and sales. “We're the first company in New Zealand to use Ecolean aseptic packaging, and it has been approved for soft plastic recycling.”

RECYCLING A PREREQUISITE FOR SUSTAINABLE PLASTIC USE

Since systems for plastic recycling are inadequate in some markets, Ecolean has a role in driving this development forward and is part of local recycling initiatives to make recycling possible in more markets.

“According to the Ellen MacArthur Foundation, only 14 per cent of plastics are recycled in the world today. As Australia and New Zealand demonstrate similar figures, customers in this area have asked if we can create solutions to solving this problem,” Sajland says.

Ecolean and its customers have joined REDcycle and Soft Plastics Recycling Initiative in Australia and New Zealand.

Sajland explains that through the two projects, companies from different sections of the value chain have joined forces to create recycling systems for flexible packaging, which is something that the kerbside collection systems do not offer.

“The flexible packages, through these initiatives, are collected in supermarkets and then sent to local recycling sites. No need for shipping the waste to other continents,” Sajland says.

“Valuable materials wasted is a global environmental problem,”

Sajland adds. “We cannot solve the recycling issue ourselves, and that is why we take action to promote recycling together with relevant partners. And our commitment to increasing the recyclability of our packages goes far beyond just that. These initiatives educate and promote changed consumer behaviours. When present recycling systems get up to speed in handling flexibles in these markets, consumers are already in the habit of helping out, and bringing packages for recycling.”

While it may be argued that local recycling initiatives are just an interim solution with, in comparison, quite low volumes, they are at least taking action today – recycling tonnes and tonnes of packages – and lowering Oceania’s environmental impact and carbon footprint, package by package. ■

YAKULT MOVES TO ASEPTIC POUCHES IN KOREA

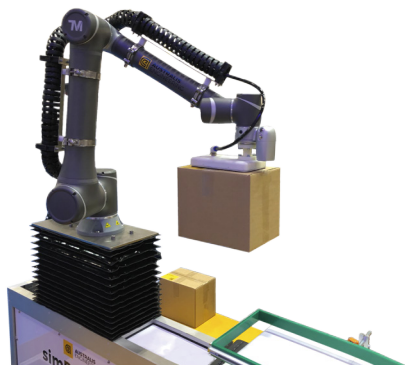
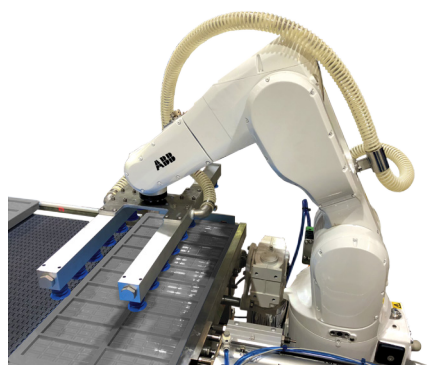
Yakult is a well-established global food and beverage manufacturer, putting one trillion packages onto the market every year. Its first liquid beverage and food products on the Korean market for ambient distribution marks the company’s move into the aseptic segment.

Yakult’s Hyfresh ready-to-drink tea has launched in the Ecolean Air Aseptic 125ml package, while in the liquid food space, Hyfresh ready-to-drink vegetable soup (pictured left) is available in the Ecolean Air Aseptic 200ml pouch.

“The Ecolean package is the perfect fit for us, since it is lightweight and flexible, yet extremely durable. We have already seen a huge interest from consumers,” says Jeonghyeon Hong, marketing manager, Yakult Korea.

Johnny Sajland, global sales director at Ecolean says the launch also marks Ecolean’s debut in Korea.

“We are looking forward to showing consumers the benefits of our lightweight packages – being microwaveable and easy to use. Brand owners using lightweight packaging are not only reporting cost savings but also an improved environmental profile and brand image among other advantages,” he says.



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Sidel installs flexible PET line for

Sidel has installed a complete flexible PET line to handle sensitive beverages and carbonated soft drinks for Bickford's Australia. This is the first time Bickford's has invested in aseptic technology with dry preform decontamination.



BICKFORD'S needed a solution. It was moving into new products, and the company needed a versatile piece of equipment. The company needed a way to handle both still and sparkling products, as well as low and high acid products with two different short bottle necks and two distinct decoration possibilities.

It found that Sidel's flexible PET line fit the profile. Angelo Kotses, Bickford's CEO and owner, says the company was mainly familiar with hot-filling PET applications.

"We decided to partially shift to aseptic PET bottling because we wanted to optimise our production set-up and achieve a better total cost of ownership, which is of course critical if you plan to attract more consumers," he says.

"Plus, we wanted to diversify our product portfolio by introducing new references, including dairy products and plant-based alternatives, and by also moving some drinks formerly packaged in glass and can to PET."

For the project, Bickford's invested

in a complete and versatile PET line that has the capacity manage both sensitive product and carbonated soft drink through an Aseptic Combi Predis™ and a Combi SF300, respectively.

The system gives Bickford's a wide branding surface to apply sleeve labels and pressure-sensitive labels.

In total, the new line now processes more than 20 different SKUs including still water, coffee beverages, four different flavoured waters, and eight types of juices – all in either 250ml, 500ml, or 1l formats. The first sellable product from the new line was introduced to the market last year.

Throughout the project, packaging experts from Sidel worked in collaboration with Bickford's marketing team to launch the new products.

Beverley Reeves, senior brand manager at Bickford's, says the company was looking to achieve an iconic shape to help the brand stand out in the crowded fields of bottled water and carbonated soft drinks.

"Our new bottles needed to offer

convenient handling to our consumers and be robust enough to hold their ergonomic shape and carbonation once opened," Reeves says.

Sidel designed new containers for the 1l Aqua Pura branded water, applicable both to sparkling and still water, with the latter supported by the StarLITETM base. To accommodate future needs, Sidel also developed an additional 600 ml design, perfectly applicable to a variety of recipes, including flavoured water.

A redesign was also necessary for the family of drinks previously packaged with hot-fill technology. In this case, the priority was to optimise the packaging while keeping the same brand attributes, also decreasing the weight of the bottle.

By changing the production set-up from hot-fill packaging to aseptic PET bottling with dry preform sterilisation, Bickford's halved the weight of their 1l juice bottle – down to 32 grams – while enhancing its attractiveness and expanding its shelf life up to eight months.

The new bottles are designed with

MAIN: Bickford's new line handles more than 20 different SKUs.

OPPOSITE: Bickford's has been operating since 1839.

Bickford's



straight body panels with simplified ribbing at the sides to allow the application of either sleeve labels or PSL; the biggest format (1l) engraved with the iconic Bickford's brand name.

"To streamline our decision process, Sidel provided many bottle design alternatives and conceptual designs with current labels as well as new prototypes," Reeves says.

Bickford's has also installed a low-speed aseptic line as part of its move towards premium products and small-batch beverage production.

To accommodate the new equipment, the company reorganised its production and raw material setup. Bickford's removed two of three hot-fill lines. The challenge for Sidel was completing installation without disrupting the production routines, while also securing the hygienic requirements needed in aseptic production.

The new PET line includes Tetra

Pak Processing Systems technologies, guaranteeing full product safety and maximising uptime starting from the process step. Additionally, the Aseptic Combi Predis is completed by the Capdis system for dry cap decontamination, while the CSD Combi features the compact and hygienic BlendFILL configuration, combining carbonator and filler in a single system for reduced consumption of carbon dioxide. Gebo OptiDry, a fully washable, stainless steel drying system with a proven efficiency of over 99 per cent is integrated. As part of the line, Bickford's opted for Sidel's proven roll adhesive labeller, plus a sleever intended to handle PS�.

Bickford's line manages both aseptic and regular PET packaging on two different Combis, thus dealing with products featuring two different bottle necks, namely 28ml for carbonated soft drinks and 38ml for the aseptically-bottled products.

The line is now running at 12,000 bottles per hour (bph) for the aseptically filled drinks and up to 18,000 bph for the carbonated soft drink products, thus contributing to a production capacity reaching approximately 60 million bottles per year.

With its new PET line, Bickford's can now handle a diverse range beverages, adding to its already varied offer of carbonated soft drink, cordials, water, juices, dairy drinks, and alcoholic beverages. ■

Asahi installs new KHS stretch blow moulder

ASAHI Soft Drinks has fired up a new KHS InnoPET Blomax Series V stretch blow moulder at its mineral water bottling plant in Rokko, Japan.

The company was looking for a machine that could fill PET bottles to meet customer demand for a simple, safe, and sustainable container.

The Blomax Series V can cut energy consumption by up to 40%, says KHS.

KHS has supplemented its Air-back Plus air recycling system with a new air management system. This, the company claims, can make for an up to 40 per cent savings in compressed air. The system uses the residual air from the blowing and recycling process to replace a separate air drier in the base mould area and in the blow wheel, which can also yield energy savings.

Matthias Gernhuber, head of area sales and product management for Asia-Pacific at KHS, said it was a great honour that a company such as Asahi trusts the reliability of KHS machines. "For saving energy in the interest of the environment and the demand for product quality are of especial importance to the Japanese," he said.

Asahi recently announced plans to order a second stretch blow moulder from the new series. ■



We decided to partially shift to aseptic PET bottling because we wanted to optimise our production set-up."

— Angelo Kotses

Rebuilding Australia with robots



PHOTO COURTESY AUSTRALIAN CENTRE FOR ROBOTIC VISION/QUT

Collaborative robots can play a part in rebuilding the economy in the wake of the destructive bushfires.

WITH an estimated 12.35m acres of land and 2500 homes and businesses having been destroyed in the fires that ravaged the landscape this summer, Australia is now faced with the arduous task of rebuilding the country.

While this might seem like an insurmountable task, the fires also bring new opportunities to the adjacent industries involved in helping rebuild the homes, buildings, and farmland that were lost in the fire, giving an opportunity to jumpstart the economy. This is particularly true in agriculture, which accounted for 14 per cent of the total land area that was burned by the bushfires. By mid-January, an estimated 820,000 ha of agricultural land had been destroyed across New South Wales, Victoria and South Australia.

RIISING FROM THE ASHES

Collaborative robot manufacturer Universal Robots (UR) believes that while this tragic event has left a trail of destruction, companies may be able to speed up the process of rebuilding by

implementing technological advancements across the spectrum.

With applications ranging from packaging and palletising, assembly, welding, and product handling, UR cobots can tackle those tedious tasks that require superhuman abilities to repeat the same movement over and over again for many hours with exactly the same precision. Cobots have been deployed across a range of industries and have become increasingly common in manufacturing environments.

"A big benefit UR cobots hold in this rebuilding process is that they provides manufacturers and industry with the ability to act fast, increase productivity, profits and offer higher quality products," Darrell Adams, head of SEO at UR, says.

Cobots can be programmed, operated, and maintained by existing employees, regardless of the team's previous robotics experience.

FOOD PRODUCTION ACCELERATED

As far as the agriculture industry is concerned, UR believes Australian farmers need all the help they can

get. With increasing interest in automated agriculture, cobots can offer an effective solution. According to a recent report, the market for agricultural robots is expected to reach \$35bn within the next five years.

"Cobots can prove their agricultural worth by assisting producers in getting their businesses back up and running faster and more efficiently," Adams says.

He notes that UR cobots can be applied to a number of requirements within the agriculture and food processing sector. Robots are used in planting, seeding, fertilising, irrigation, weeding, thinning, pruning, harvesting, and milking applications.

The company prides itself on the cobot's ability to handle delicate agricultural processes and products. Such an example can be found in the dairy industry, where a UR robot arm mounted to a small pallet jack is used to disinfect and milk cows. This cuts labour costs and time taken to complete the job. The robot occupies no more space than a human milker and doesn't require any safety caging.

Another application where cobots can be implemented is in the packaging of goods that are sent to market. Adams notes one case study of a UR10 robot, installed at a food manufacturer. The robot worked independently to pack vanilla cream bags into cartons, but also formed part of a network that includes a carton erector, a carton sealer, and a filling machine. "This is one of the real benefits of cobots – they can work alongside workers and form part of your factory process."

Collaborative robots are also ideal for hygienic food processing environments, where it can operate around the clock during seasonal periods of high production and can be easily redeployed to new applications as needed, helping local farmers reach their production goals faster.

A LOCAL SUCCESS STORY

Developed by the Queensland University of Technology (QUT) in partnership with UR, Harvey, a robotic harvester combines state-of-the-art robotic

ABOVE: Harvey is a type of robotic harvester developed by QUT and Universal Robots.

vision and manipulation techniques to identify and harvest capsicums.

Harvesting labour in Australia ranges from 20-40 per cent of operational farming costs and this combined with a shortage of skilled labour can result in some of the crops not being harvested.

In recent trials, Harvey used images from a camera-in-hand system to locate the fruit. A motion-planning algorithm was used to command a novel multi-mode harvesting tool to detach the fruit. Results show a success rate of 76.5 per cent – a significant improvement when compared to the state-of-the-art, which achieved 33 per cent in a similar scenario. Harvey also achieved an average pick time of 20 seconds for this field trial compared to 106 seconds by its predecessor.

This year, QUT will further develop Harvey as part of its involvement in

Cobots... can work alongside workers and form part of your factory process."

the new Future of Food Systems Cooperative Research Centre backed by \$35m in Australian government funding over 10 years, and \$149.6m in cash and in-kind funds from more than 50 participants.

ACCESSIBLE COBOTS

According to Adams, UR has recently begun to offer a financial services

leasing programme for the robots, which could prove to be a lifeline for producers who are rebuilding their business.

"We are levelling the playing field by enabling all manufacturers to immediately put cobots to work without an upfront capital investment. UR Financial Services offers a fast, low-risk and financially friendly model to accelerate automation. The partnership makes it easy to upgrade existing cobots, add additional units or test cobots for the first time – and equips users to maximise productivity, quality and profitability, without increasing costs or cash outlay," Adams says.

Adams believes the time has come to think more laterally about agriculture, and that robotics is the revolutionary new technology that can change the way we think about producing and packaging food. ■



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Danone launches farm-to-fork dual QR tracking

Dual QR code packaging innovation is at the heart of global food giant Danone's digitally enabled Track & Connect service for consumers and retailers, introducing a new level of supply chain transparency for its baby formula brands. Lindy Hughson reports.

DUAL QR code packaging innovation is at the heart of global food giant Danone's digitally enabled Track & Connect service for consumers and retailers, introducing a new level of supply chain transparency for its baby formula brands.

Danone has initially launched the service in China for its Aptamil and Nutrilon brands. The company has plans to roll it out this year in Australia, New Zealand, and Germany for its Aptamil and Karicare brands, and in France for its Laboratoire Gallia brand.

David Boulanger, senior vice president of operations at Danone Specialized Nutrition, said, "Thanks to this innovation in packaging and data management, we'll be able to offer one of the most comprehensive traceability services in the baby formula industry and connect more closely to our consumers and retailers to offer them after sales services they value."

For shoppers, Track & Connect is accessed via smart phones by scanning two QR codes on baby formula packs, one printed on the outer pack and a second, inner laser QR code printed behind a tamper-resistant seal – which can only be scanned after purchase.



Scanning the first, outer QR code will give the consumer access to a brand page containing verified information on where and when the formula was manufactured, and the product's journey through the supply chain. The second, inner QR code will trigger a one-time, initial message, verifying the product is authentic.

Danone says that, ultimately, it aims to leverage this dual-QR code packaging innovation to introduce customised after-sale support and services that it believes consumers value – such as health and nutrition apps and information, useful 'how to' parenting videos, and access to customer helplines or online e-commerce services.

The inner QR code is printed behind the tamper-resistant seal.

It's the inner Track & Connect code that would give shoppers access to this extra level of service. It also holds the key to important data for Danone and its distributors and retailers, that will allow more accurate forecasting of consumer demand and consumer preferences. This data can also be used to provide further

insights on consumer buying habits and could be used in personalisation of offers through initiatives such as loyalty programmes.

The Track & Connect service is powered by blockchain, serialisation and aggregation technology which, Danone says, offer a safe and secure method of storing data and information on the movement of baby formula products through the supply chain. ■

We'll be able to offer one of the most comprehensive traceability services in the baby formula industry."

ABOVE: Danone will roll out Track & Connect this year in Australia and New Zealand on its Aptamil and Karicare brands.

INSET: The inner QR code is printed behind the tamper-resistant seal.

ISTOCK/ TRIBAL-WARRIORPLUS



The upside of 2D

Development of data-embedded codes continues, aiming to improve their benefits for Australian supply chains, with Woolworths and Matthews part of the industry working group.

CROSS-INDUSTRY collaboration in projects to develop better data access is vital in achieving deep benefits for the entire supply chain, according to Mark Dingley, CEO of intelligent identification specialist Matthews Australasia.

"The information shared between Woolworths as a major retailer, us as a developer of ID technologies, along with other entities including GS1, means we can collectively develop leading-edge standards, guidelines and solutions that benefit not just one or two companies, but the Australian manufacturing industry and therefore, the economy as a whole," Dingley says.

WHY 2D CODES?

Two-dimensional (2D) barcodes have many benefits and advantages over one-dimensional (1D) codes, including capacity and use, Dingley says.

"2D codes save valuable 'packaging real estate' because they can store more information and more character types in a smaller space than 1D codes. Another benefit is that they

can be more tolerant of print-quality fluctuations than 1D barcodes."

2D codes, he says, also come with built-in error checking systems, meaning that if a code is damaged, it has more redundancy to still be read compared with a damaged 1D code.

ADVANCEMENTS

While 2D codes have been around for a while, they are mainly associated with a quick response (QR) code for consumer engagement.

"Many Australian manufacturers probably aren't aware of the full capabilities of 2D barcodes, let alone how they can add value to their business and processes, because most food and beverage suppliers rely on 1D codes, such as the EAN13 barcode, to identify products at retail POS," Dingley says.

"However, last year Woolworths announced it was going to trial GS1 data-embedded 2D barcodes with some meat and poultry suppliers in a handful of stores from August 2019, to help reduce product recall, food waste, sales of expired products and to improve traceability."

Woolworths launched a trial of GS1 data-embedded 2D barcodes in a few stores from August 2019, to help reduce food waste and improve safety, traceability and stock management.

Dingley says benefits of 2D codes include: enhanced product identification; data can be embedded into one compact symbol; the globally unique product ID replaces the national solution for variable measure items; improved traceability; faster and more accurate recalls; product authentication; a safer supply chain; and less food wastage because it's easy to identify when products are going to be out of stock.

There are two types of 2D codes: QR codes and Datamatrix.

Dingley explains: "As already mentioned, brands use QR codes to communicate with consumers in say competitions and promotions, where the consumer uses their smart device to scan the QR code, and the relevant application deciphers the code and takes action, such as connecting to a webpage. Made up of square modules, Datamatrix codes are read by 2D imaging scanners or vision systems and are popular for marking small items such as fresh produce."

Dingley says last year Woolworths launched a trial in partnership with GS1 Australia, after trials in Thailand, Germany, and Belgium.

"To date, the work that Woolworths and Matthews are doing as part of the GS1 industry working group has proved good grounding for greater supply-chain application," he says.

Woolworths has said it would work with industry bodies and suppliers to develop a phased roll out plan to ensure more suppliers can adopt the new technologies. ■

Pushing packaging boundaries in Paris

Porte de Versailles, south of Paris, was the place to be in late January for anyone with a keen eye on trends in the premium packaging space. The annual ADF & PCD fair attracted 650 exhibitors and more than 10,000 visitors over two days. On assignment for PKN, Dominique Huret of Cape Decisions walked the aisles to discover these gems.



1 DEFTLY DOES IT

New household brand Deft brings the patented Anyway Spray technology, winner of the ADF Award in 2017, to market. The pack offers a 360° delivery, 100 per cent restitution, fine mist, and zero emission propellant thanks to compressed air.

SUPPLIER: DEFT

2 GOOD HAIR DAY
Kao Cape aerosol hair spray has a new push button that works as a lever to reduce, by 40 per cent (=14N), the force needed to deliver the product. Designed ergonomically, the button is activated at the touch of a finger and shaped in order to help the consumer finger to direct the spray accurately. The can also sports a recess for easy hold.

SUPPLIERS: TOYO AEROSOL INDUSTRY CO, TOYO SEIKAON AND DAIWA CAN COMPANY.



3 THINK THIN

At just 15ml thick, the bottle for Lancome's Idôle is designed to fit in the hand like a smartphone. The thinnest of its kind on the market, the glass bottle does not even stand up! Lancome owner L'Oréal has admitted the development of the bottle involved pushed the boundaries of glassmaking expertise. The vial is encircled by a metal frame and topped with a tiny, extra-light cap.

SUPPLIERS: POCHET / QUALIPAC-GLASS; QUALIPAC; AXILONE, SILGAN - CLOSURES

4 PLASTIC IS CHIC

Yves Saint Laurent Serum Reboot is a good illustration of the growth in refillable solutions for the luxury market. The outer over-moulded PETG jar is lacquered in four different colours for the four variants in the range. The collar and the cap are designed to be reused, while the refill is inserted in a thin soda-lime glass vial, including the pump system. The vial is designed to look like it is levitating within the outer jar. A clip attaching or binding the two is achieved via a bayonet system.

SUPPLIER: ALBEA - OUTER JAR; FLACOPHARM - INNER VIAL



5 HAND WASH SHAPES UP

The Kao Bioré U Foam Stamps hand wash dispenser distributes flower-shaped doses of foam, using only one hand. The system allows for different shapes of foam to be dispensed. The nozzle features a flat plate and a push ring design, which makes the package appealing for children.

SUPPLIER: YOSHINO KOGYOSHO CO



6 IN THE COLOUR ZONE

'Colour Zone' makeup presents a concept similar to 'parallel universe', an unknown zone of endless imagination and possibilities. The packaging is designed to resemble a UFO, ready to traverse and explore in the colour zone. On each pack, there is a strong complementary colour combination, implying that everyone's inner side is a multiple and complex proposition which can radiate endless emotional colours.

SUPPLIER: SHANGHAI NIANXIANG BRAND DESIGN & CONSULTING



7 DIGITAL BY DESIGN

Times Square is a digital perfume bottle that blends functionality with cosmetic demands.

With the built-in display and speaker, the consumer can personalise the bottle using its USB port. The flacon is primarily designed for use at the point of sale. The battery runs for approximately three months in standby mode. It is rechargeable and refillable. The product won a Red Dot Award 2019 in the product design category.

SUPPLIER: HEINZ GLAS GMBH



9 FLEXIBLE FRENCH SOPHISTICATION

The Paco Rabanne Pacollection is a disruptive innovation targeted at the fragrance sector. The packaging feels like a soft and flexible pouch. It is a sophisticated construction of an inner pouch, foam layer and several layers of laminates welded together with special equipment. The development took 18 months of research and 64 different trials before the final pack. A dedicated factory was created to automate its production. The next step in development is a refillable version.

SUPPLIERS: PINARD EMBALLAGE, TNT MANUFACTURING, SILGAN, TESEM

8 SUSTAINABILITY IN THE BAG

This ready-to-use bag, created by designer Giorgio Fabbini, has zero plastic in the packaging materials. The handle is made of TENCEL, a 100 per cent bio-sourced fibre created from FSC-certified eucalyptus and spruce. The paper is 100 per cent post-consumer waste, made from recycled fibres. The printing, assembly and finishing components are soya-based inks, water-based glues and spot varnish respectively. The blue colour selected is close to Classic Blue, the pantone colour of the year 2020, evoking serenity and a sense of calm.

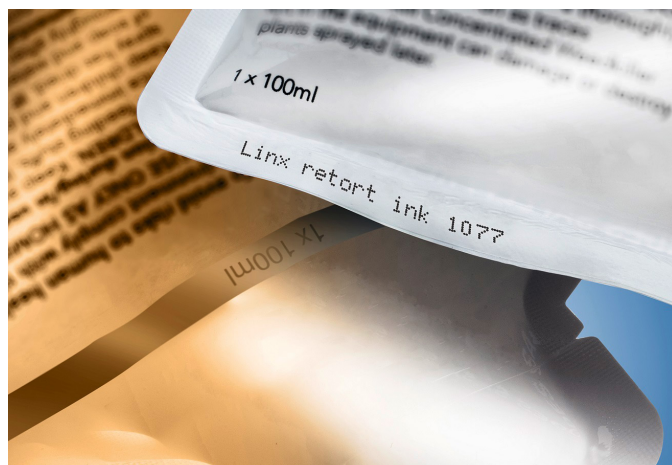
SUPPLIER: PROCOS FRANCE



10 LEGO STYLE

Stonebrick is a new line of makeup developed for South Korea's largest retailer. This is the first fully customisable range with individual components joining magnetically to create custom collections. The individual eyeshadow, lipsticks and face product colour bricks also connect magnetically onto a choice of base sizes, allowing endless combinations and promoting collectability.





Linx launches new ink for coding

Linx Printing Technologies, represented in Australia by Matthews Australasia, has released a new ink designed to resist moisture, colour change, and transference.

Black retort ink 1077, developed for Linx's 8900 and 8800 Series continuous inkjet coders, is a dye based MEK ink for use in typical sterilisation and wet retort process conditions. According to Linx, its special formulation allows printers to code through a thin layer of oily film or grease. The ink contains components that enhance its adhesion under moist and high-temperature conditions.

Linx bills the new ink as suitable for a variety of food packaging applications, including any products coded before cooking.

W: matthews.com.au T: 1300 263 464

ePac sets record with HP Indigo presses

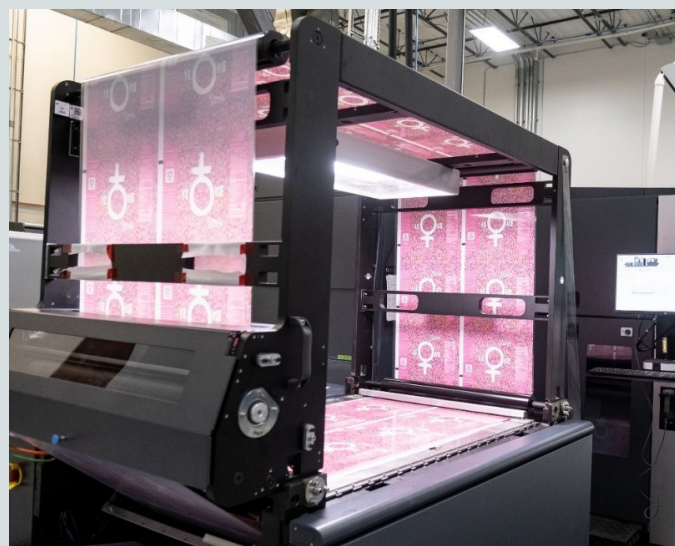
Flexible packaging printer ePac has broken the production record on its fleet of HP Indigo 20000 digital presses operating around the world, pumping out 20 million impressions in January.

Carl Joachim, ePac CMO, said, "Our customers have discovered the advantages of locally sourced, fast turnaround packaging as a means to drive market expansion of their brand. A high percentage of orders today are coming from returning customers."

By the end of 2020, ePac is set to roll out 52 HP Indigo 20000 presses as it continues its global expansion to 20 locations. The growing ePac footprint includes sites in the US, Canada, and the UK.

Supplied in Australia and NZ by Currie Group, the HP Indigo 20000 Digital Press is a 30-inch wide web printing solution that can digitally produce the vast majority of flexible packaging applications.

W: curriegrup.com.au T: (02) 9889 0104



Brewery gets new fill line

New beer filler technology from Krones has helped modernise an Austrian brewery. The bottling machine manufacturer installed a new Modulfill HES line for glass bottles at the Murau brewery, boosting its capacity to 36,000 fills per hour.

The filler, which can also handle CSD, incorporates new technology and design enhancements such as oil-free bottle lifts, and a serrated drip edge at the lifting-rod assembly cam.

Josef Rieberer, MD of the Murau brewery, said, "We're rather proud that we're the first brewers in Central Europe to use this ultra-modern filling technology from Krones."

W: krones.com T: (02) 9647 0200

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- Pouching and Cartoning machines
- Casepacking Systems

GRUNWALD
Dosing · Filling · Packing



Bucket Filler

ALPMA



Cheese Cutting

KHS
Filling and Packaging – Worldwide



Pouching Machine

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Rotary Cup Filler

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Cheese Wrapping

ferrum



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