



# WPONEWS

The packaging community around the world



Better quality of life, through better packaging, for more people

## President's Word

### Trends that became reality

**Pierre Pienaar\***

After 18 months of the pandemic, the packaging industry remains in the spotlight as we search for innovative solutions to sustainable packaging and e-commerce design demands. I continue to be amazed at the resilience of the human spirit as we rebound and find ways across the world to re-establish the industry to a new normal.

I recently saw a report from Adam Page, Director of Research and Reports at Smithers, said that though there was a dip in the global packaging market forecast in 2020, there is a current rebound underway with the expectation of a return to former projected growth by 2024.



The pandemic has accelerated pre-existing trends such as fast-tracking e-commerce usage; shifted consumer behaviour in ways such as increasing consumption of pre-packaged food products; and disrupted supply chains with material shortages, shipping delays, and resultant increases in material prices.

He went on to say that "when looking at post-COVID trends, sustainability is still a key driver and e-commerce brings big opportunities to the areas of transit and protective packaging". E-commerce has seen a ten-year growth in three-month's time during the pandemic, and Nielsen forecasts 70% of global consumers will do their grocery shopping online by 2024. With this rise in e-commerce comes a need for additional packaging to enable products to enter a more complex distribution chain.

We are therefore entering an exciting growth with wonderful opportunities over the coming 03 years, as this report when on to say that: there is investment and an increase in collection and recycling, as well as investment in simplifying multi-material laminates and developing high-barrier mono-material solutions. This is in itself most exciting.

Package design will continue to be influenced by consumer trends, particularly the demand for convenience with easy-to-open and resealable closures. Flexible packaging is seen replacing glass bottles and metal packaging due to light weighting, and there is an expectation to see a growth in mono-material pouches.

Another emerging market is the recycling of plastics as demand for plastics continues to grow worldwide. We need to put in place an effective system to handle the waste-plastics volumes that will be generated across the globe. Research shows that a path could be established that would increase the amount of waste plastics going to reuse and recycling, to around 50% of the volumes produced. To achieve this will require an alignment of regulators and significant support from major user industries such as consumer goods and automotive and of course support from society that generally relies on plastics daily. To ensure a growing and high-quality supply of waste to recycle, plastics companies will need to be involved in waste-management technology improvements that will facilitate collection, sorting, and cleaning. For the chemical industry and plastic producers this is important but would need to support the development of technologies and the building of recycling infrastructure that will bring waste plastics back into the value chain.

The future looks bright for the packaging world, as I always seek articles in the media that project what we can be expecting. This is even more important as we try and seek what life

will be like in a post-Covid world. By analysing emerging technology, global packaging trends, and market projections, we can get a reasonably good idea into what the packaging industry might potentially look like into the near future. Here are five emerging packaging trends that may reshape packaging that we can focus on and that I will expand on in the next issue of WPO News:

- Sustainability
- E-Commerce
- Corrugated Packaging
- Manufacturing and Operations
- Automated Home Delivery

My thoughts are with those affected by the virus around the globe. On behalf of all at the WPO, I wish you good health and safety. Take care and best wishes.

**\*Pierre Pienaar is President of WPO**

- ✉ [.president@worldpackaging.org](mailto:president@worldpackaging.org)
- f WPO – World Packaging Organization
- in [pienaarpierre](https://www.linkedin.com/company/pienaarpierre)
- 🐦 [@WorldPackOrg1](https://twitter.com/WorldPackOrg1)

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## Around the World

### Have you heard about the Ethical Packaging Charter Foundation?

The Ethical Packaging Charter Foundation is the patron of Best Packaging 2021, the well-known contest promoted by WPO member, the Italian Packaging Institute

([www.istitutoimballaggio.org](http://www.istitutoimballaggio.org)).

This year's edition was dedicated to technological solutions that were inspired by the 10 principles of the Ethical Packaging Charter: responsible, balanced, safe, accessible, transparent, informative, up-to-date, forward-looking, educative and sustainable.

Since its inception, the Ethical Packaging Charter has been sponsored by the Italian Packaging Institute, which in 2019 acquired the rights and gave birth, in May 2020, to the Ethical Packaging Charter Foundation.



Anna Paola Cavanna is the President of the Ethical Packaging Charter Foundation.

"To obtain ethical packaging, you need to start from eco-design. The renowned Best Packaging contest is a precious opportunity to observe how the participating companies have interpreted the range of values that constitutes the heart of our Foundation", declares the President, Anna Paola Cavanna.

"The pandemic has pushed us to think differently, perhaps for the first time, the distance has been shortened between the perception of packaging and its service value in everyday life in terms of safety, protection and accessibility.

There is a demand for sustainability that companies can no longer ignore. There is a need for more information on sustainability meaning and principles that guide action and direction. It is up to us, who possess the expertise, to clarify the matter. This is why we decided to enter the field as a Foundation.

Enhancing the packaging virtuous role is a demanding challenge, but also a civic commitment, which allows us citizens to make conscious choices when purchasing and consuming products. A commitment we wish to take on with the support of Ambassadors, key figures in contributing effectively to change and affirming an ethical and sustainable business culture for the packaging supply chain, in line with the ten points of the Charter ", concludes Anna Paola Cavanna.

The 10 principles stated in the Ethical Packaging Charter show all their strength and they are the starting point for a vast and far-reaching cultural project that generates projects and programs with very concrete implications:

- The "Become Ambassador of the Ethical Packaging Charter" campaign aims at creating a business network capable of disseminating a new industrial culture inspired by the principles of the Charter. Registrations are open.
- Projects with national and international universities, for the development of highly qualified and valuable professional figures. Within this program, the first and only of its kind, Advanced Training Course (CAF) in Packaging Management, started in Italy, in

collaboration with the Faculty of Economics of the La Sapienza University in Rome.

- By the end of 2021, the publication of the dossier "The Foundation's Algorithm" will provide companies with a valuable scientific tool for measuring the CO2 parameter to support safe, ethical and sustainable innovation.
- The production and publication of works and informative materials to stimulate a responsible, balanced and transparent packaging design reflection.

For more information visit [www.fondazionecartaeticapackaging.org](http://www.fondazionecartaeticapackaging.org) or contact Francesco Legrenzi, Director of the Ethical Packaging Charter Foundation, by e-mail [legrenzi@fondazionepackaging.org](mailto:legrenzi@fondazionepackaging.org).

## Deposit return system to the beverage market in Greece

AGMPM (Association of the Greek Manufacturers of Packaging & Materials – [www.pac.gr](http://www.pac.gr)), a WPO member, and the international environmental consultancy Eunomia Research & Consulting are calling for the Greek Government to implement a non-profit deposit return scheme (DRS) to give Greece the best chance of reaching new recycling targets in the EU Single Use Plastic (SUP) and Packaging and Packaging Waste Directives.

The SUP Directive will require Greece to collect 90% of single-use beverage containers for recycling by 2029, while the Packaging and Packaging Waste Directive mandates that 55% of plastic packaging by weight is collected by 2030.

A public consultation on new legislation outlining how Greece will transpose the requirements of the Directives into Greek law is set to launch next week, and a DRS has been put forward as one of the key elements of a complementary Greek recycling system.

DRS, which see a financial deposit added to the price of a beverage container which can be redeemed upon to return of that container to a recycling point, is used successfully in other countries around the world, achieving collection rates of over 90% with very low levels of material loss due to the high quality of material collected. DRS also contributes to greatly reduced levels of marine litter and the financial and environmental costs associated with it.

AGMPM and Eunomia held a webinar last May to discuss the basics of a DRS in the Greek context. The panellists recommended that Greece should implement a sustainable DRS with the following features:

- run as a single, not-for-profit system owned and managed by obligated industries;
- clear and concise legislation outlining minimum return rates, minimum deposit fee level and stakeholder obligations;
- transparent rules for the Retailers Handling Fee and Industry Fee;
- right level of deposit (balance) - high enough to motivate consumers to return, at the same time low enough not to motivate fraud;
- controlling measures on sales, returns and collection to tackle fraud.

Dimitris Mandis, Chairman of AGMPM, said: "We believe that the most critical phase for the implementation of a DRS is the designing phase. The Ministry of Environment should call not only the stakeholders but also top experts around Europe in order not only to select the proper tools for the Greek region but also to fine tune all the critical parameters, since our target is a well-operating system protecting the local market and prohibiting any fraudulent activities."

Head of the Eunomia Athens office Hara Xirou added: "It is essential to design a sustainable DRS in Greece on all single-use beverage containers that draws from successful EU practices and requires those deposit systems to be inclusive by material and size, centred on return to retail, and as accessible as possible to the public."

The video of Eunomia and AGMPM's webinar can be accessed at <https://www.youtube.com/watch?v=9qAYH2Jjic&feature=youtu.be>

## AIP and ABA announce winners of 2021 Scholarship Program

The Australasian Bioplastics Association (ABA), in conjunction with the Australian Institute of Packaging (AIP – [www.aipack.com.au](http://www.aipack.com.au)), a WPO member, are pleased to advise that the winners have been announced for the 2021 ABA Scholarship program.

The annual ABA Scholarship program enables one eligible candidate the opportunity to undertake a Diploma in Packaging Technology and a second person the opportunity to undertake a Certificate in Packaging.

The finalists were: Karunia Adhiputra (Packaging Specialist, Nestlé Australia), Maria Becerril Roman (Packaging Technologist, Coles), Ron Fan (Packaging Technologist, Ego Pharmaceuticals), Tunde Lovestyan (State Business Development Manager, FPS), Lea Reynolds (Commercialisation Manager, Steggall Nutrition), Mark Saturnino (Packaging Specialist, Woolworths) and Libby Treves (Packaging Technologist, Frucor Suntory).

The 2021 ABA Certificate in Packaging Scholarship winner is Maria Becerril Roman (photo) AAIP that started as a Food Chemist in Mexico and advanced in the packaging career since she arrived in Australia. Fresh out of the Master of Food & Packaging Innovation Degree with a Dean's Honours, she found her way into Coles and has a keen interest in Packaging Sustainability, Innovation and Compliance.



And the 2021 ABA Diploma in Packaging Technology winner is Karunia Adhiputra (photo) AAIP. With a Master of Food Science, he is a Packaging Specialist at Nestlé, working under the Corporate Packaging division to assist packaging technologists in identifying solutions that would meet Nestlé's ambition of 100% recyclable or reusable packaging, as well as virgin plastic reduction by 1/3rd by 2025. In addition to this role, he is also the Safety & Compliance owner for packaging materials, which requires Adhi to review certificates and documentation provided by packaging suppliers, ensuring they are compliant to regulations for food contact packaging. He is also responsible for supporting the technical development of the business unit packaging technologists.



## Relevant webinars in Greece

AGMPM (Association of the Greek Manufacturers of Packaging & Materials – [www.pac.gr](http://www.pac.gr)), a WPO member, has been organizing a series of webinars since the end of 2020. The one about the new European regulation 2020/1245, which amended the 10.2011 commission regulation on plastic materials and articles intended to be in contact with food, was organized in cooperation with the Hellenic State Laboratory.

Another interesting webinar was about toxicology and migration of food contact packaging materials and articles. The two-hours training session included the theoretical analysis of chemical substances risk assessment according to the defined standards and practices of the toxicology science (in vivo, in vitro). The practical part of the webinar focused on the laboratory battery of tools used for the detection of migratable chemicals into food and food simulants.

For more information contact Miltos Mellios, AGMPM Manager, by e-mail [info@pac.gr](mailto:info@pac.gr).

## PIDA awards winners are announced



In the judging panel WPO President, Pierre Pienaar, and WPO Vice President Sustainability & Save Food, Nerida Kelton.

WPO member, Australian Institute of Packaging (AIP – [www.aipack.com.au](http://www.aipack.com.au)), recently announced the winners of the 2021 Australasian Packaging Innovation & Design (PIDA) Awards. The program was designed to recognise companies and individuals who are making a significant difference in their field across Australia and New Zealand.

The Packaging Innovation & Design of the Year company awards recognise organisations that have designed innovative packaging within each of these six categories:

1. Food Packaging Design of the Year
2. Beverage Packaging Design of the Year
3. Health, Beauty & Wellness Packaging Design of the Year
4. Domestic & Household Packaging Design of the Year
5. Labelling & Decoration Design of the Year
6. Outside of the Box Design of the Year

The PIDA Awards also sees finalists in a number of special awards including:

1. Marketing Design of the Year
2. Save Food Packaging Design of the Year
3. Sustainable Packaging Design of the Year
4. Young Packaging Professional of the Year
5. Industry Packaging Professional of the Year

The PIDA awards are the exclusive feeder program for Australia and New Zealand for the prestigious WorldStar Packaging Awards, the global packaging competition organized by WPO. The 2022 Australasian Packaging Innovation & Design (PIDA) Awards will be open in late 2021.

Check the winners announcement videos at <http://aipack.com.au/2021-pida-awards-finalists-winners/>. For more information, contact AIP Executive Director, Nerida Kelton, by e-mail [nerida@aipack.com.au](mailto:nerida@aipack.com.au).

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## From the Board

### World Design Challenge on Sustainable Packaging attracts more than 100 participants from different countries



The Sustainable Packaging Design Challenge, a collaboration between WPO and World Design Organization (WDO) launched in April of this year, culminated in a series of final presentations from 7 teams on Friday, 4 June. The project regrouped 11 facilitators, seven thought leaders, 76 participants and 28 student participants from 32 countries.

Held over the course of two weeks from 24 May to 4 June 2021, the initiative was developed in alignment with the United Nations Sustainable Development Goal 12: Responsible Consumption and Production. The challenge aimed to address internationally relevant topics related to sustainable packaging, including food waste and safety, circularity and changing lifestyles to spur meaningful change at both the individual and industry level.

Participants worked to develop project proposals and early prototypes on seven main topics:

- E-Commerce
- Packaging that saves food
- Food service packaging
- Healthy and on-the-go lifestyles
- End-of-life solutions
- User-centric and safe packaging
- Consumer behaviour change

The outcomes of this World Design Challenge on Sustainable Packaging will be released as part of a final report to be published in the coming months.

## World Packaging Organisation joins forces with members to create 'WPO Packaging Database'

Last April, WPO announced the creation of a 'WPO Packaging Database' that will contain global data such as regulations, safety, technology, sustainability, etc, all related to the packaging industry. This is a conjunction project with longstanding Chinese Board members, CPF (China Packaging Federation – [www.cpf.org.cn](http://www.cpf.org.cn)) and CEPI (China National Export Commodities Packaging Research Institute – [www.pack-envi.com](http://www.pack-envi.com)).

"We have decided to take a step-by-step approach to collect important global packaging information. This is a project we have had in our agenda for a number of years but always lacked the resources", states WPO President, Pierre Pienaar.

It is a project for the next 3-5 years and will begin with the collection of important global packaging market information. The first topic to be explored in 'WPO Packaging Database' is the size of the packaging industry in WPO members' countries. All the collected information will be displayed in the WPO platform database administered by CPF/CEPI where virtual address will be announced soon.

## WPO signs an strategic cooperation agreement with Reed Exhibitions

WPO recently announced the signature of an strategic cooperation agreement with Reed Exhibitions (China) ([www.reedexhibitions.com](http://www.reedexhibitions.com)) which purpose is "to expand industry network to drive the growth and the development of the packaging industry". The agreement seeks to strengthen PackWorld, Reed Exhibitions' shows portfolio, in China. This portfolio includes SinoCorrugated, SinoFoldingCarton, SinoFlexPack, sinoPaper, InMat, Packon and DPrint Expo).



WPO believes this agreement is an excellent opportunity to enhance packaging expertise through expanding its international education and networking programs, including conferences, innovative packaging zone, packaging awards, packaging knowledge and network through Reed Exhibitions events.

## WPO supports Propak Connect, the new platform by Informa Markets



WPO is supporting ProPak Connect ([www.propakconnect.com](http://www.propakconnect.com)), a new platform by Informa Markets, that aims to showcase, engage and connect with the Processing and Packaging Community all over the world. According to Informa Markets, "ProPak Connect is an online integrated supplier showcase

platform and content hub. It has extended features that will host various platforms for sourcing and enquiry management, facilitate online networking and interactive product and machine demo's, and enable virtual and hybrid events. Above all it will provide a targeted online marketing solution for companies within the packaging and processing industry.

The new world-class online platform for the processing and packaging industry with includes:

- **Comprehensive and Interactive Company Showcase** – Detailed listing for participating companies with several features embedded for enhanced product display and enquiry generation. Including rich media options such as images, videos, documents, and the ability to host online product demos.
- **Industry Insights** – ProPak Connect aims at bringing together industry specific content through its online webinars, roundtables, and conferences addressing some of the current needs across the various sectors of the industry, all hosted seamlessly on the platform.
- **Connect with Business Partners** – Extending global audience reach through virtual and hybrid events that aims at connecting on-site participating companies with buyers across the globe online and vice-versa. With added features such as one-on-one chat and business matching, video conferencing, and enquiry management to facilitate real-time business dialogue.
- **Integrated Advertising and Branding Solutions** – ProPak Connect will offer companies with advertising and branding options that will give them the opportunity to target buyers and promote their products and brand at various touch points throughout the platform, its events and beyond.

WPO's role in the partnership is to promote the platform and to participate in specific

events, like webinars, articles, etc, offering relevant content through the experts that are part of its Executive Team.

## Entries for WorldStar 2022 are open!



The banner features the WPO logo and 'WORLDSTAR GLOBAL PACKAGING AWARDS' on the left. The center contains a large star shape composed of a grid of small images showing people and packaging. On the right, it says 'WORLDSTAR 2022 is Open for Entry' and 'APPLY NOW www.worldstar.org'. The text 'Do you want to be a WorldStar?' is positioned on the left side of the star.

WPO announced that entries for the WorldStar 2022 edition are already open until 15 October 2021. Packages eligible for WorldStar are those that have already received a national award recognised by WPO.

For further information, visit [www.worldstar.org](http://www.worldstar.org) or contact the WorldStar Coordinator, Soha Atallah by e-mail [s.atallah@worldpackaging.org](mailto:s.atallah@worldpackaging.org).

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## WorldStar

### WPO announces the winners of 2021 edition



On June 9th, WPO organised the prestigious hybrid WorldStar Ceremony for 2021 winners, with over 250 people attending, from 53 countries across the globe. The ceremony was co-hosted by WPO President, Pierre Pienaar and Vice President Sustainability & Save Food, Nerida Kelton.

During the ceremony, WPO announced 194 winners from 32 countries, including the winners of the Special Categories (Marketing, Sustainability and Packaging that Saves the Food) and the prestigious President's Award. Furthermore, Ralph Moyle, CPP FAIP received the Lifetime Achievement Award for 2021. And the winners of the Special Categories are:

#### President' Award winners

- Gold: Packlock (Ideewiss AG, Switzerland)
- Silver: Label – Rumcajsovka (Etiflex, s.r.o, Czech Republic)
- Bronze: PerFORMing (Mondi Consumer Packaging GmbH, Austria)
- Bronze: Lincoln & York's Recyclable Coffee Packaging (A.Hatzopoulos S.A., Greece)
- Bronze: Hansol EB (Hansol Paper Co.,Ltd, Korea)

#### Marketing Award winners

- Gold: Communication Label U-Universe (Rise LTD, Russia)
- Silver: Hakutsuru Sake Ukiyo-E Label box series (Rengo Co.,Ltd., Japan)
- Bronze : Multi-functional, Transparent Windowed Food Packaging (Tulipack Ambalaj San ve Tic A.S., Turkey)

#### Sustainability Award winners

- Gold: Coca-Cola Amatil rPET Program (Coca-Cola Amatil , Australia)
- Silver: Jordan Green Clean (Orkla Home & Personal Care, Norway)
- Bronze: KraftPal X Pallet (KraftPal Ltd., United Kingdom)

#### Packaging that Saves Food Award winner

- Gold: Polymer bottle "Vognyar" (Fireman) with protection against UV rays (Pack Group, Ukraine)

The video of the ceremony can be accessed in the YouTube link <https://lnkd.in/dWVVp-G> and the list with all winners is also available in the webpage [www.worldstar.org](http://www.worldstar.org).

Entries for the WorldStar 2022 edition are already open until 15 October 2021. For further information, please contact the WorldStar Coordinator, Soha Atallah by e-mail [s.atallah@worldpackaging.org](mailto:s.atallah@worldpackaging.org)

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## WorldStar Student

### Entries for the 2021 WorldStar Student Awards are open!



This international student award programme is a key aspect of the WPO objective of "Better packaging for more people" by discovering and attracting talent into the global packaging industry.

The purpose is to expose students to the world of packaging and the industry at large. Through participation, students tackle projects that illustrate their potential and test the skills that are required for the art and science of packaging. Students gain insight into the role packaging plays in the supply chain and marketing of a product as well as the benefits and functionality of packaging.



The 2019 Student Winners at the WorldStar Awards Ceremony

If your country does not have an existing student awards programme, launching one does not need to be a major undertaking. Many of the programmes around the world started off very small and very simply. The organisers of the WPO WorldStar Students Awards would be pleased to offer help, suggestions and guidelines to assist in the creation of your own programme.

For those with existing competitions, remember that all the recipients of awards in your programme qualify for entry into the international competition. The reason the WPO WorldStar Student Awards require entries to have been awarded any award in a recognised competition to be eligible for entry is to ensure that the entries submitted are considered to be of a suitable standard before being presented for international scrutiny and evaluation.

Go to [www.WorldStarStudent.org](http://www.WorldStarStudent.org) for details and the easy on-line entry process or send an e-mail to the Award organizer, Bill Marshall [Bill@SyndicateGraphics.co.za](mailto:Bill@SyndicateGraphics.co.za). Entries close 1st November 2021.

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## Technical Article

### TISTA approves new unitized load stability test

The International Safe Transit Association (ISTA), a WPO member, has developed a new qualitative (pass/fail) test method that predicts the effects of non-restrained horizontal impacts on unitized loads during mechanical handling. The download of the whitepaper is available at ISTA webpage [www.ista.org](http://www.ista.org).

### Load Stability Performance Testing of Unitized Packaged-Products for Transit Whitepaper

The stability of unitized loads provides challenges for many companies around the globe. The ISTA Standards Council authorized a workgroup to be formed with the objective to improve the industry's ability to predict the effects of non-restrained events that occur on unit loads in a generalized supply chain. To tackle



Load Stability Performance Testing of Unitized Packaged-Products for Transit



As our virtual meetings are well received, we plan to keep hybrid meetings in the future. As there is no substitute for face-to-face meetings, we do not want to give them up, but for all members who are not able to travel, they should still be part of our meetings through online access. Nevertheless, optimistic as we are, the next "real" meeting will then be South Africa 22. – 26. November 2021 – fingers crossed!

Another improvement of our system, as reported in our last newsletter, is the credit card payment for WPO fees! I want to encourage all our members to use this option. Please ask Tanja for details, if anything is unclear.

Moreover, our active cooperation with other international bodies is going very well. Besides our action with WDO (World Design Organisation) to launch a joint design challenge on packaging, we also have projects going on with UNIDO. Packaging trainings for Pakistan and (maybe) Cuba are in the pipeline. Details will be communicated in due time, as preparation is still going on. Further news are available on the front of our Corporate Partners: Hiroko Akieda, our Global Ambassador, takes over the main part in the care of our corporate partners – thank you Hiroko!

Last, but not least, one big project is our WPO Global Guideline. WPO, together with FH Campus Vienna and ECR Austria is currently in the process of developing an understandable and easy-to-use global guideline for packaging designers and non-packaging professionals. The first version currently includes only countries with good collection and recycling infrastructure. More countries with a more basic infrastructure are planned to be included in the next version. Further details will be announced as soon as we finished our first version.

So, as you can see, even if we were a bit crushed like that box in our last newsletter, we continue our work all around the globe, because our community is strong!

#### **Tanja Woschniak & Barbara Zotti**

WPO Secretariat

[info@worldpackaging.org](mailto:info@worldpackaging.org)

#### **Johannes Bergmair**

WPO General Secretary

[j.bergmair@worldpackaging.org](mailto:j.bergmair@worldpackaging.org)

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## **Special Article**

### **Pharmaceutical packaging: the changing world**

**By Chakravarthi AVPS\***



India is pharmacy of the world and supplies 18% of global generic medicines, apart from catering to huge domestic market demands. Its position is unabated even under this pandemic situation. So, the packaging industry is expected to come up with these requirements too, along with a new set of challenges.

The critical role of packaging cannot be undermined whether it is uninterrupted supply of essential drugs, expediting PPEs and testing kits, or supplying the vaccines which are critical in current pandemic situation to several nations, simultaneously meeting huge domestic demand. Pharmaceutical packaging is always designed to meet safe use of medicines by patients and as we are aware, buying a medication is extensively different from buying some consumables in a supermarket.

The industry which is surviving well under the current pandemic situation all over world, despite a slew of hurdles and umpteen challenges, is pharma and healthcare. Obviously packaging industry, being an integral part of the pharma industry also is contributing under this pandemic situation.

Packaging plays an important role in maintaining product quality and efficacy throughout the supply chain gamut. And it acquires all the more relevance, given the life-saving and life-sustaining nature of pharma and medical devices, Today, the healthcare industry is witnessing an unparalleled demand for personal protective equipment (PPE), diagnostic kits, medical ventilators and so on. This is in addition to the spurt in demand for critical medicines and hygiene products like sanitisers and hand rubs. Packaging plays a vital role in ensuring the safety and security of all the above items until they reach the hands of people who need them the most.

In packaging, the top of the table were rigid plastics, blister foils, paper and paper board packaging. While paper board, paper, glass, plastic, metal, rubber and others come under basic raw material, the packaging products made out of all these materials meet host of requirements viz. folding cartons, display units, paper labels, leaflets, ampoules, bottles, vials, syringes, cartridges, closures, bags, tubes, laminates with paper or aluminum foil, collapsible tubes, rigid cans, needles, gas cylinders, pressurized containers, closures, plungers among many others.

## The role of packaging in pandemic times

Under the current pandemic situation, consumer behavior has completely changed in every aspect. Physical interactions between patients and doctors are declining rapidly. With advanced digital communication available easily every corner, consultations are happening remotely.

I would like you to recall my statement, "Packaging will be your second physician". It is really apt under today's situation and is evident from fact that ease of administration, dosage accuracy, dose monitoring, minimising (zeroing) medication errors have become the key factors, apart from safeguarding drug efficacy, providing product information while following regulatory framework in designing a pharmaceutical packaging.

It is a fact that India is still a developing country and so affordable and efficacious drugs are in demand, but this does not deter the accessibility of technological advancements to the customers (ex. revolution in mobile communication). The pharma and packaging industries always have great synergies and gregarious relationship.

The innovation in each industry inspires the other to excel. The demand to optimise the drug delivery for healthcare professionals and patients in today's circumstances is much larger than ever before. And so, packaging has to innovate with accelerated R&D efforts to keep up with the technological advances, remain competitive and not exceed the regulatory framework. The final contact between the drug and the patient is packaging. It's simply impossible to fill the supply chain of the pharma industry without adequate packaging and labelling.

## Sustainable packaging

Well, packaging plays a crucial role in maintaining the quality, safety and efficacy of all pharmaceutical products throughout the value chain. In pursuit of making a packaging sustainable we also must realise the fact that any packaging which falls short of serving its defined purpose can never sustainable – no matter the amount of material reduced, recyclability or use of more recycled materials.

Designing sustainable packaging for pharmaceutical products is not an easy task. The packaging design must ensure that all product packaging must comply with the local packaging regulations and look for ways to reduce their environmental impact.

Anyway, there are lot of new sustainable packaging materials which can be reused or recycled are now available. Thought it is not possible to use for every application (for example the primary packaging for a complex molecule) several sustainable materials like PCR plastic or a recycled plastic and biodegradable material like recycled paper, paperboard, films derived from natural resources are also available for certain applications. The material that has a negative carbon footprint and easily recyclable eventually wins in the sustainability race. Pack that weighs less or occupy less space while fulfilling their purpose also contributes to the sustainability journey.

The world health organization identified three directives to help reduce and eliminate waste: reducing packaging that is not essential to the protection of the drug, making as much of the packaging as possible recyclable, and making contaminated packaging incinerator-safe.

In true sense, all packaging products must be designed keeping sustainability in mind paying attention to all components that include consumables like solvents, inks and adhesives. In addition, the post use disposal scenario needs to be taken into consideration as well.

## Design thinking in packaging

Designing a pharmaceutical packaging is tad different from doing it for other products. While sustainability, protecting the environment must be taken into consideration several other issues like product safety and efficacy throughout the supply chain gamut, regulatory compliance, patient convenience must be given priority while designing a packaging. Well, if you think the drug for which you need to design the packaging is one of the most effective and efficacious, the packaging must not only safeguard that qualities but use all the factors that convey this message viz., the graphics, the colors, the text and words in the labelling; on the packaging and of course the material used for packaging itself.

The consumer must always have a feeling at the first instance that the product is well designed. If its an OTC product its all the more important to consider several aesthetic factors too the give the FMT feel to the customer. One must not forget the fact that your customer may or may not see the promotions in print, electronic or even in digital media. Invariably all the customers will see what is there in (and On) packaging, This is the reason packaging is referred as a tool to extend your brand.

Now consider designing a Child resistant packaging...

The packaging must ensure an easy access to the needy (read the senior citizens or even people with arthritic hands) at the same time deter the child from accessing the product. So,

its is essential to design a packaging that enable the people an easy open solution, simultaneously makes it difficult for children to access the medicines.

Similarly, a medical device or a prefilled syringe must be hermetically sealed to provide all the production, the medical staff or even the patient who needs to access it must have an easy opening option.

User experience should always be in forefront while designing a product and it must communicate effectively and emotionally the objective to the consumer and in a nut shell the design thinking must elicit a meaningful experience to the patient in the simplest possible manner.

## Future trends

The future of the pharma market will be having a focused market approach rather than a saleable model. We started seeing these trends catching up in some segments already. Pharma industry's approach today is more customer centric. Every development revolves around patient needs because it is the influencing factor to shape the market. Its noteworthy that, self-administered devices with advanced technology, especially for combination drugs are on the rise. Smart inhalers and nasal sprays will gain more demand. Transdermal patches are currently used for pain relief and normal healthcare. Similarly, a lot is happening in oral dissolvable films. This format is very useful for pediatric and geriatric patients. We have heard that Gilead Sciences is developing an easier-to-administer version that can be inhaled for the sought-after antiviral drug Remdesivir for COVID-19.

Use of Artificial Intelligence in every field will be on the rise. Concepts of smart packaging with advanced NFC components may become a norm for certain products. Evolution of ultra-thin ICs that can be embedded in any package has given scope for incorporating more features. Implantable medical devices gain ground as they are very appropriate for regulated drug delivery in certain cases. Wearable medical devices is another segment to watch. Many of them are already finding their applications, not just for diagnostics and monitoring purposes but also respiratory, therapeutic pain management and others.

End of the day, I sincerely believe that every innovation has to help mankind to get benefited at large.

\***Chakravarthi AVPS** is WPO Global Ambassador and an expert in packaging and pharmaceutical industries

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## Special Article

### AIP undertakes Australia's first Industry Insight Reports for Save Food Packaging Design

By Nerida Kelton\*



Sadly, Australia is one of the worst offenders for food waste and loss in the world with a staggering 34% (2.5 million tonnes) of all food wasted in the household, followed very closely with 31% (2.3 million tonnes) in primary production. In economic terms, food waste in Australia has become a \$20 Billion problem that sees each person waste on average 298 Kg of food a year. Add to that the environmental impacts that sit behind food production including water, land, energy, labour, capital and the fact that far too much food waste is heading to landfill and creating greenhouse gas emissions.

Australia needs to build a sustainable food system that delivers food security, considers social, economic and environmental impacts and no longer sees food waste heading to landfill. This is where innovative Save Food Packaging (SFP) Design has a role to play within the food system.

### What is Save Food Packaging (SFP)?

Save Food Packaging uses innovative and intuitive design features that can contain & protect, preserve, extend shelf life, easily open and reseal, provide consumer convenience and portion control; all the while meeting global sustainable packaging targets.

To embed Save Food Packaging Design into businesses we first need to understand whether manufacturers consider food waste and loss, how packaging technologists are designing food packaging, if marketing are ensuring that on-pack communication provides the best messaging to consumers and what the barriers are to implement SFP strategies.

As a core participant of the Fight Food Waste Cooperative Research Centre, the Australian Institute of Packaging (AIP) Save Food Packaging Design project has released two stakeholder industry insight reports that will help to set a baseline for current design practice and enable a path forward for areas of improvement.

The Save Food Packaging Consortium is made up of the Australian Institute of Packaging (AIP) as project lead, RMIT as the Research Partner; Project Contributors will be Zipform Packaging, Sealed Air, Multivac and APCO; and Project Partners are Plantic Technologies, Result Group and Ulma Packaging. The Extension Network consists of Australian Food Cold Chain Council (AFCCC), Australian Food and Grocery Council (AFGC), Australian Institute of Food Science and Technology (AIFST). The consortium is made up of experts who work in Save Food Packaging Design to ensure that the project develops practical guidelines that are suitable for the industries they will serve.

The two reports are called 1. Industry Insights Report: Stakeholder Online Survey of Product-Packaging Design Processes and 2. Industry Insights Report: Stakeholder Interviews of Product-Packaging Design Processes.

As Australia's first industry insight reports for Save Food Packaging, these reports represent the current landscape of the food and packaging industry regarding perceptions and practices of food waste and Save Food Packaging.

We encourage everyone to access these reports and consider utilising some of the recommended Save Food Packaging design features into your packs.

The research reports are available on the AIP website:

- <http://aipack.com.au/aip-undertook-australias-first-industry-insight-reports-for-save-food-packaging-design/>

or you can download below:

- [http://aipack.com.au/wp-content/uploads/FFWCRC121\\_SFPDC\\_OnlineSurveyReport\\_final-25.11.20\\_v3.pdf](http://aipack.com.au/wp-content/uploads/FFWCRC121_SFPDC_OnlineSurveyReport_final-25.11.20_v3.pdf)
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\***Nerida Kelton MAIP** is Executive Director of Australian Institute of Packaging (AIP), a WPO Member, and WPO Vice President Sustainability & Save Food (nerida@aipack.com.au).

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## Special Article

# Let's get Smart about Packaging

By Nerida Kelton\*



You may have heard the terms Active & Intelligent Packaging but not really understood the role that these solutions can play in extending shelf life, monitoring freshness, displaying information on quality, improving safety, and enhancing consumer convenience.

Smart Packaging systems do not only monitor food quality and safety but also work as a digital footprint to track and trace food all the way from pack house to households. Active & Intelligent Packaging Systems can also ensure that food waste is minimised all the way across the Supply Chain.

**Active Packaging** provides functionality to extend shelf life and actively changes the condition of the packed food when additives are incorporated into the substrates, or inside of the packaging. Depending on the required outcome the additives release, or absorb, into the packed food, or surrounding environment, to not only improve shelf life but also quality, safety and sensory traits of the food. Active Packaging can be designed to retain or eliminate Oxygen, Carbon, Humidity and Odours and can release compounds to the food such as CO<sub>2</sub>, Antimicrobials, Antioxidants, aromas and more.

Active Packaging includes numerous solutions including Modified Atmosphere Packaging (MAP), Equilibrium Modified Atmosphere Packaging (EMAP), Spoilage/Pathogen Indicators, Moisture Absorbers, Oxygen/Ethylene Scavengers, Carbon Dioxide Emitters and Scavengers, Flavour/Odour Absorbers, Preservative Releasers, Ultraviolet Barriers and Antimicrobial Packaging and more.

**Intelligent Packaging** communicates product changes and monitors the condition of the packed food to provide information about the quality of the food from farm to plate. Intelligent Packaging include Time Temperature Indicators (TTI's), Shelf-Life Sensors, colour-changing thermochromic inks and labels and more.

Intelligent Packaging can contain either an external or internal indicator for the sole purpose of sensing, detecting and recording determined information about the food all the way across the Supply Chain. This information can identify whether any environmental changes have occurred to the product during the Materials Handling, Logistics and Transportation of the goods to the consumer. Intelligent Packaging systems can also be used for tamper evidence, product protection, as an anti-counterfeiting device, all the while providing real-time data for track and trace. These systems are an innovative digital information tool that can view the product across all sectors of the supply chain and ultimately communicate the full lifecycle of a product direct to consumers.

The Active & Intelligent Packaging Industry globally continues to develop innovative systems that can improve quality control, extend shelf life, optimise freshness, control shipping and transportation routes, access food that has spoiled at any point within the supply chain and communicate with consumers. Consumers can also reap the benefits of being informed about everything from the freshness of the product, whether the food has been stored at the right temperature, through to whether it is fit to eat or about to turn.

## Examples of innovative Active & Intelligent Packaging Solutions

### Grape N' Go EMAP punnet

The Grape N' Go punnet developed by Result Group and Navi Co Global in Australia was designed to minimise food waste and to enable consumer convenience. The Grape N' Go product is packed with EMAP controlled atmosphere technology in the punnet allowing product respiration and extension of shelf life. The structure of the lidding film has two laminated layers with perforated laser holes on the surface of the lid to allow for optimal O<sub>2</sub> permeability. These non-visible to the eye holes allow product respiration and support an extended shelf life. Grape N Go's reclosable lidding employs a special, uncured adhesive layer that is exposed when the consumer first opens the multilayered reclosable lid. Once exposed, the layer maintains its adhesive properties for up to 20 uses, even under challenging cold conditions of refrigerated storage.

### Longer lasting avocados

Mission Produce, an advanced avocado network, partnered with Hazel Technologies to launch AvoLast by Hazel®, a new shelf-life extension program that enables avocados three extra days of optimal ripeness on average. The AvoLast program uses a quarter-sized biodegradable and food-safe packaging insert that temporarily blocks an avocado's ethylene receptors and slows the ripening process. By increasing the shelf-life of both hard and ripe Hass avocados, it aims to reduce retail throwaways, in turn increasing profit while creating more positive consumer experiences that drives category growth.

### Materials and sensors are combined for interactive food expiry label

Innoscentia have developed expiration date labels that offer real-time monitoring of food quality to help reduce waste and alert consumers to spoiled food. The technology works by measuring the Volatile Organic Compounds (VOCs) which are emitted as gases inside the packaged meat. As the gases begin to signal that the meat is degrading, sensors in the labelling can connect to a consumer's smartphone or digital system to advise them that their food is about to spoil. The technology can estimate when an expiry date is likely to occur.

### Mowi's end-to-end traceability platform for Salmon

Mowi, the world's largest producer of Atlantic salmon, worked with EVERYTHING to help launch its brand with 100% transparency, powering food traceability and provenance for its product lines. Using a Smartphone consumers can scan the package to understand the full lifecycle of the salmon. On each item's packaging, there is a consumer-scannable QR code that uses the global standard, GS1 Digital Link which connects to the item's digital identity in the EVERYTHING platform revealing batch-level information on the Salmon.

### Real-Time Shelf-Life Indicator for Meat, Poultry and Fish

Blakbear have developed a paper-based electrical gas sensor that indicates how much shelf life is left for packaged meats, poultry and fish in real time. Consumers can access the shelf-

life data in real time when they scan the RFID tags with their smartphones notifying them of how much shelf life is remaining. It will also provide the consumer with information on whether the product is still safe to eat or should be discarded.

## 100 million connected packs rolled out for UK dairy Brand

Food brand Yeo Valley Organic, in partnership with SharpEnd, have rolled out connected packaging across all products as part of the new 'Put Nature First' brand platform. Working with connected consumer agency SharpEnd, Yeo Valley Organic says it can now engage directly with consumers through its most scalable media asset. Consumers will be able to use their smartphones to scan the 'Moo-R' QR codes which can be found on over 100 million products. Yeo Valley wanted to inspire others about the benefits of organic and how it is one crucial factor in addressing the climate crisis. The content will encourage everyone to put nature first in their own small way, whether that is buying British organic dairy more often, reducing food waste or encouraging wildlife into their garden.

## Anti-Counterfeiting and Serialisation for Premium watermelons

Kezzler's track and trace technology includes high-value locally produced watermelons and rice being produced at the government sponsored National Model Agricultural Industrial Park located in Hanting, Shandong. Kezzler's technology includes the attachment of a unique ID to every product, for every watermelon to protect the premium product from counterfeiting. The system uses a patented algorithm, called a DME (digital massive encryption) to produce many IDs in a short time, to be used for serialisation via QR codes, RFID, etc. Consumers can use WeChat to scan the packaging, from their smartphone via a User Interface. This will also give them access to information about how the product was grown, when it was harvested.

It is evident when looking at all of the latest innovations in Active & Intelligent Packaging that this technology is advancing rapidly and can provide significant benefits to everyone along the value chain. If you are interested in ensuring the highest level of food safety, quality, freshness, the ability to minimise unnecessary food waste along your supply chain and communicate directly with your consumers then consider Active & Intelligent Packaging systems.

\***Nerida Kelton MAIP** is Executive Director of Australian Institute of Packaging (AIP), a WPO Member, and WPO Vice President Sustainability & Save Food (nerida@aipack.com.au)

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## Innovation from Corporate Partner

### Packaging with the X-tra

# VENTING – DOSING – CLOSING



Premium quality for total customer satisfaction: founded by the Sander-Beuermann family back in 1958, today SABEU is a leading system supplier of microporous filter membranes and plastic components for the packaging, life sciences and medical fields as well as other industries. The company is the only manufacturer in the world that produces plastic components and membranes and also assembles them to form the end product.

Thanks to its decades of market and applications experience the company provides a high-quality product line under the FLUX<sup>®</sup> trademark within the packaging segment of its business. SABEU is pursuing very ambitious targets particularly in the development of this business division which includes the Venting, Dosing and Closing product segments. Dispensing Taps, Degassing Solutions (Inserts, Caps and Membranes) as well as Screw Caps are product groups within the wide-ranging portfolio that provides the "X-tra" quality, and they offer a wealth of unique selling points.

All the manufacturing processes including our in-house tool-making operations are carried out at "Made in Germany" sites. As well as providing our standard product portfolio we also undertake OEM projects and provide customer-specific services. The products in our premium FLUX<sup>®</sup> range meet the highest quality standards and provide excellent value. Great emphasis is also placed on international conformity in relation to food compliance.

A quality management system which is certified according to DIN EN ISO 9001:2015, DIN EN ISO 13485:2016 and DIN EN ISO 50001:2018 promotes maximum product safety, continuous improvement, and sustainability for the benefit of users. The issue of sustainability in particular is viewed from a very specific perspective:

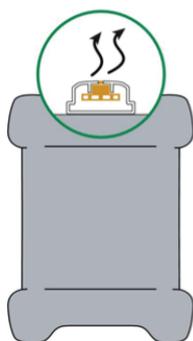
"Our stated aim of providing superb quality is based not least on the fact that we want to help the user prevent any environmental and human hazards by maximizing product safety", stresses Jennifer Hughes, the responsible sales manager for the company's Packaging division in North America.

## Optimal venting

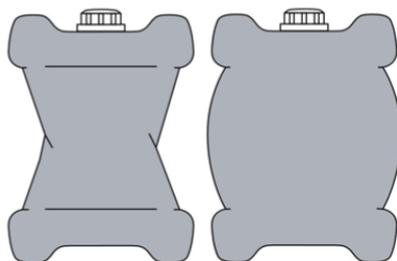
FLUXX® Degassing Inserts are fitted with water- and oil-repellent membranes which ensure that gaseous substances can escape, so there is no pressure build-up or drop in pressure in any of the many different types of containers. Appropriate use is also made of the company's Degassing Inserts: the membranes are not moistened by liquids and they therefore remain fully breathable at all times, so the container retains its original shape.

The degassing solutions are designed both as individual degassing inserts for integration into users' existing caps or with inserts which are already welded into the ready-to-use cap.

With **FLUXX®**  
Degassing System



Without  
degassing system



The swelling or collapsing of containers is successfully prevented by using **FLUXX®** Degassing Systems



**FLUXX®** Degassing Inserts in three product sizes featuring a range of different membrane solutions

Just in the past year three new versions have been developed for specific applications: F38 LOCK SN, F38 HP and F17 HF. The LOCK SN is a Short-Neck locking system which provides an optimal fit in manufacturers' standardized caps. The F38 HP (High-Pressure) withstands extreme pressures while also providing excellent venting. In the case of the F17 HF (High-Flow) a significantly increased rate of air flow is achieved.

"A small and apparently simple – but extremely important – detail gives our Degassing Inserts a significant competitive advantage: the patented drip-off edge is a real unique selling point and it ensures that the membrane remains permanently gas-permeable. Jennifer Hughes goes on to stress that: "Our Degassing Inserts can also be used in the food consumable sector in many international markets".

## Unique dosing

The company's **FLUXX®** Dispensing Taps have helped users with the decanting of liquids for decades in many different applications. This product segment combines excellent leak-tightness and functionality. Over the years we have developed a wide range of products within this segment. The Dispensing Taps are suitable for all commonly used thread sizes for a variety of different containers such as bottles, canisters, drums and IBCs with an external thread ranging from DIN 38 to DIN 71 as well as plastic and steel drums with a 3/4" or 2" thread. The various product sizes can be supplied in two designs: with a 13 mm or a 23 mm outlet spout. Dispensing Taps with a 23 mm outlet spout enable the decanting of large amounts of fluids in a very short period of time. This series has an impressive average flow rate of over five liters a minute. Dispensing Taps with a 13 mm outlet spout are ideal for precision dosing procedures, in particular in the case of narrow threaded necks.



FLUXX® Dispensing Taps with a 23-millimeter outlet spout

The FLUXX® Dispensing Taps are used in a whole variety of different sectors, but mainly in applications relating to liquid food, hygiene and care products, cleaning agents, agrochemicals, and hazardous substances used in industry. Thanks to their unique twin-chamber ventilation system and their drip-off edge, these products enable fast and clean dispensing without "gurgling" or "dripping". Another popular feature is the smooth-moving lever for ease of operation. As well as resistance to a multitude of aggressive chemicals, this product segment too can be used in the food consumables sector.

## Reliable closing

All the products are ultimately intended to close containers securely. High-quality materials are the key to being able to do this. Dispensing Taps must be leak-tight when they are closed, but also provide high flow rates when they are open. When used in customers' caps, Degassing Inserts must ensure that fluids can't escape from the container while also renewing the air supply in order to provide constant pressure compensation. Vented Caps are ready-to-use solutions consisting of a combination of a degassing solution and a screw cap.

Furthermore, various cap versions in standard sizes of DIN 45, 50, 51 and 61 round off the portfolio, and they are also available with in-built degassing and sealing functions.



FLUXX® Closing Systems for many different containers



Ready-to-use FLUXX® Vented Cap with degassing function



Since 2010 SABEU GmbH & Co. KG which is based in Northeim in central Germany has been an integral part of the ALTENLOH, BRINCK & CO Group, a medium-sized family business which now has more than 1,600 employees around the world and a turnover of over 410 million dollars

## Trends and visions

### Interview with Jennifer Hughes

*Ms. Hughes, just in the last twelve months three new fully automated machines for the assembly of Degassing Inserts have been brought into service in order to expand the company's production capacities. What does this mean for the business?*

**Jennifer Hughes:** Due to the incredible demand and growth of the Packaging division over recent years we have increased our production capacities. This has involved incorporating additional fully automated machines and expanding the sales team.

The new machinery for Degassing Inserts has enabled the production and monitoring processes to be further enhanced. We will continue with this strategy as a commitment to our customers to meet the demand for our products.



Jennifer Hughes, Sales Manager  
Packaging North America:  
"Premium quality helps to avoid any  
environmental and human hazards"

*What's been happening over recent months, and what can the market look forward to?*

**Jennifer Hughes:** In terms of our portfolio we've recently been able to unveil various new products in particular a Dispensing Tap with a DIN 63 thread as well as Degassing Inserts which provide higher rates of air flow and pressure build-up in the container. Further product innovations are already being planned. Supplementary measures for 2021 are the integration of another three machines for the Degassing Inserts and Vented Caps as well as the design optimization of our Dispensing Taps. We're also increasingly taking account of sustainability issues.

*Your company is also focusing more heavily on international markets. What are your plans in this area?*

**Jennifer Hughes:** We're positioning ourselves so that we can have successful sales operations in all the international markets. This involves the bringing together of the necessary HR resources, but conformity levels are also being enhanced to meet the specific market requirements in particular relating to food applications. In addition, we'll be raising our profile at trade fairs including virtually due to the new challenges that we're all now facing. So we're already planning to attend the Pack Expo trade fairs in the USA.

Visit the new website at: [www.fluxx-sabeu.com](http://www.fluxx-sabeu.com)

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