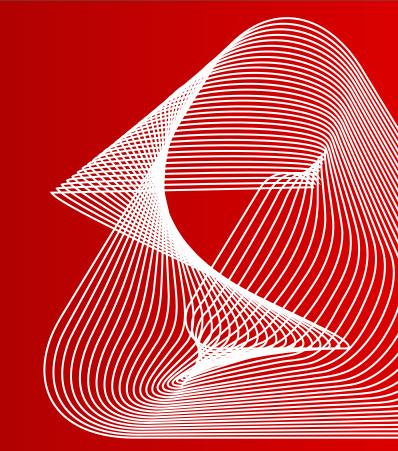




Sustainability Packaging Trends and Solutions



2022

Welcome to the Webinar

Starts at 10:30 AM



Please wait

- Sustainability Packaging Trends
- Sustainability Packaging Solutions





Speakers for Today



Chie Jooi Koh Segment Development Director, ASEAN

20+ years of self-adhesive label converting experience in packaging industry Webinar Part 1



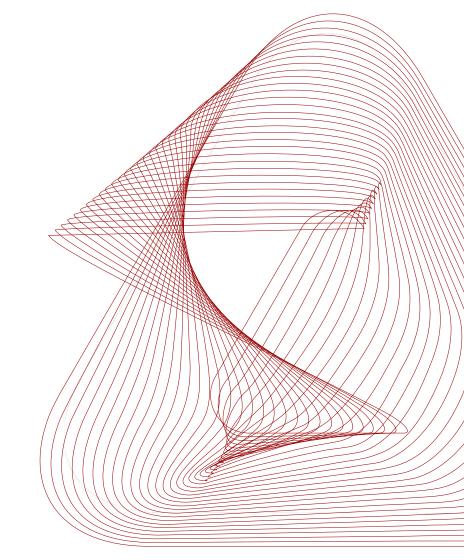
Yvonne Chung Technical Marketing Manager, ASEAN

14+ years of flexible packaging and technical development in manufacturing industry <u>Webinar Part 2</u>



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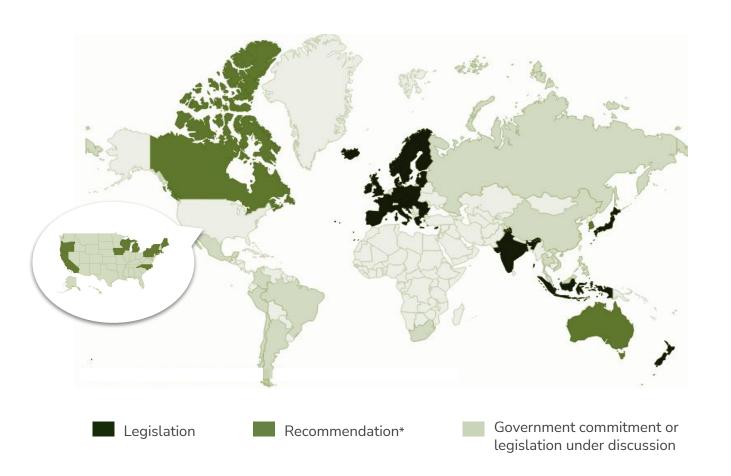
Sustainability Packaging Trends





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Regulation increasing, aiming to promote recycling and reuse in plastic packaging



*Guidelines from the government likely to become future legislation

Europe

- EPR guidelines by 2025
- PET beverage bottles 25% recycled plastic by 2025
- Plastic packaging recyclable by 2030

ASEAN

- Countries in the ASEAN region represent some of the world's worst polluters of packaging waste.
- Effective packaging and waste regulations are typically not present, inadequate, or not enforced with high levels of mismanaged waste.
- Public-private partnerships emerging, creation of appropriate infrastructure to deal with their packaging waste.

The problem with plastic is not in how it is used, but in its end-of-life management.

Key Packaging Legislation in ASEAN

Country	Packaging Design	Extended Producer Responsibility (EPR) Situation	Plastic Strategy
Thailand	Phasing out of single-use plastics by 2022.	Explicit EPR laws on packaging waste remain in the drafting stage.	Free from 3 types of plastic (microbeads, cap seals & oxo- degradable plastic) – and from 4 other types of single-use plastics by 2022.
Singapore	-	Only electronic waste is subject to an EPR, implement in 2021.	Achieve a 70% overall recycling rate by 2030.
		EPR will be extended to packaging waste by 2025.	
Indonesia	Polystyrene banned	The legal framework for an EPR system is in place, but implementation has yet to happen.	Reduction of marine plastic debris by 70% by 2025.
Malaysia	Voluntary ban on straws by 2020 in restaurants. Carrier bag ban aimed for 2022	Set to introduce EPR in 2023 voluntarily and mandatory by 2026	Roadmap towards Zero Single-Use Plastics (2018-2030).
Vietnam	Single-use Plastic ban planned end 2025	Introduced EPR on Jan 2022	Reduction of marine plastic debris by 75% by 2030.

Sustainability Packaging Trends

- FSC certified paper material
- Reduction in use of material
- Post-Consumer Recycled (PCR)
- Compostable Packaging
- Refill and Reuse
- Pressure Sensitive Label Enables Recyclability
- Recyclable mono-material packaging
- Smart Packaging Enables Sustainability





FSC Certified Paper Material

Nestlé has developed a paper-based which is sustainably source the paper, and it's Forest Stewardship Council (FSC) certified. Kimberly-Clark releases first FSC certified 100% bamboo product





Source: https://thedieline.com/blog/2019/7/15/nestle-says-yes-to-new-paper-based-wrappers?

Source: https://tissueonlinenorthamerica.com/kimberly-clark-releases-first-fsc-certified-100-bamboo-product/



Post Consumer Recycled (PCR) Container

The **Palmolive** Ultra brand of dish soap is now using a 100% post-consumer PET bottle in North America.



Ice Mountain 100% Natural Spring Water bottles are now being made from 100% PCR.



Sources: https://resource-recycling.com/plastics/2021/03/24/colgate-palmolive-launches-100-pcr-bottle/



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Source:

Compostable Packaging

Frito-Lay® Launches Industrially Compostable Bags with Off The Eaten Path® Brand



Source: https://candyusa.com/cst/frito-lay-launches-industrially-compostable-bags-for-off-the-eaten-path-brand/



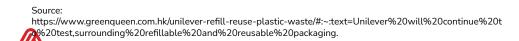
Reuse and Refill

Unilever, started its largest in-store refill trial in Europe. Following the trial's success, the multinational corporation is expanding its refillable packaging trials across the U.K.



Unilever has joined forces with Indonesia's Saruga packaging-free store in Bintaro to launch its biggest product refillery yet.





VERY

DENNISON

Source: https://www.unilever.com/news/news-search/2020/indonesia-in-store-refill-station-launches-with-11-unilever-brands/

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Pressure Sensitive Label Enables Recyclability

US-based manufacturer of drink mixers Zing Zang has completed the transition of its 32-ounce Bloody Mary mix bottle from glass to plastic featuring 25 percent post-recycled content and CleanFlake technology from Avery Dennison. Woolworths has advanced towards their sustainability goals with CleanFlakeTM technology, a recyclable label solution now being applied to its plastic juice bottles as well as millions of other PET packages.





Source: https://www.packagingmag.co.za/cleanflake-provides-pet-recycling-solution-to-retailer/

Source:

https://www.labelandnarrowweb.com/contents/view_breaking-news/2020-10-20/beverage-manufacturer-turn s-to-avery-dennison-cleanflake-technology/



Mono-material Packaging

Ajinomoto Developed Environmental-Friendly "Mono-Material" Packaging



Source: https://www.ajinomoto.com.my/media/press-release/ajinomoto-developed-environmental-friendly-mono-material-packaging

HDPE Recycling - PSL recognized to enhance the recyclability of high-density polyethylene mono-materials



Smart Packaging enable Sustainability

Rewe and Vytal

REWE is the first food retailer in Germany to offer a free takeaway-and-return system for salad bar utensils. Its cooperating partner is Cologne start-up Vytal, which operates a deposit-free, digital takeaway-and-return system for containers.

Sources: https://ndion.de/en/free-takeaway-and-return-system-rewe-cooperates-with-vytal-for-salad-bar/

Cup Club

Coffee cups and lids are designed to be used a minimum of 250 times. Cups are made from food grade PP and lids from food grade LDPE. Both contain an embedded RFID tag for supply chain traceability.

Sources: https://www.greenbrownblue.com/reusables-cupclub/



Sustainability Packaging Solutions



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Sustainable Labeling solutions are continually evolving



Enables Recyclability, Reuse, or Compostability

What we use can be used again



Contains Recycled or Renewable Content

Give a second life to what has already been used



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	\bigcirc
	\cup

Reduction in the Use of Materials

Use only what is necessary

Responsibly Sourced

Products sourced from a supply chain that shows care for people and the environment



Further methods to improve Environmental Impact.

Advanced technology uses to deliver a more environmentally friendly solution





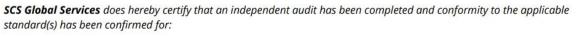
Products sourced from a supply chain that shows care for people and the environment.

Film made from renewable alternatives and paper certified by the FSC® or other organizations





The mark of responsible forestry



Avery Dennison Materials Sdn. Bhd.

Lot 6 Jalan P/2, Kawasan Perusahaan Bangi, Bandar Baru Bangi, SGR 43650, Malaysia Please refer to addendum for additional certified locations.

This multi-site certificate covers the production and distribution of paper products using the transfer system.

The facility(s) are hereby Chain of Custody certified to sell products as:

FSC Mix, FSC Recycled The assessment has been conducted by SCS Global Services in accordance with the protocols of the Forest Stewardship Council® A.C. (FSC®).

FSC Standard: FSC-STD-40-003 V2-1; FSC-STD-40-004 V3-0; FSC-STD-50-001 V2-0

Certificate Code: SCS-COC-005041 Trademark License Code: FSC-C122337

Valid from: 27 August 2019 Expiry date: 26 August 2024

This contribute intelling one not constitute evidence that a particular product supplied by the centritate holder is FSC-central field for FSC charmal for FSC charmal field for FSC charmal field for





The mark of responsible forestry



Darah B Manis

Sarah Harris, Managing Director SCS Global Services 2000 Powell Street, Ste. 600, Emeryville, CA 94608 USA





Reduction in the Use of Materials

Use only what is necessary



PP40 The thinnest film label, ideal for high-speed labelling needs





A semi-squeezable construction

with "no-label' look



PE75 A fully conformable and squeezable label



DT60 The thinnest direct thermal paper label



MC Elite FSC Thinner semi gloss paper label with on par performance

Vellum Elite FSC Optimizing the resource consumption

26

Flex+



Contains Recycled or Renewable Content

Give a second life to what has already been used.



Biomass Adhesive Made of 30% raw materials from renewable source

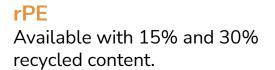


Biobased Adhesive Made of 30% bio-based components









rPP Made of 30% recycled content

rDT Direct thermal label with 15% Consumer Waste (PCW) content



rPET Liner Content 30% Post Consumer Waste (PCW) PET bottle flakes.



Reduction in the Use of Materials



Value Generating Benefit



Improved transportation & storage cost

Increased revenue with productivity improvement

Reduced waste handling cost, sustainable solution









Enables Recycling, Reuse, or Compostability

What we use can be used again.



CleanFlake[™] Clean removal of label from PET & HDPE plastic.



Compostable Labels Biodegradable and compostable solution approved for direct contact



Film for HDPE recycling Enable mono-material recycling of HDPE plastic



Enable Recycling





- Adheres to APR design guidelines for PET and HDPE recycling
- One solution that supports PET Bottle-to-Bottle recycling & HDPE mono-material recycling
- Available with various PP and Flex+ labels
- Reduce waste to landfill
- Enable circular economy and material can regenerate to recycle products

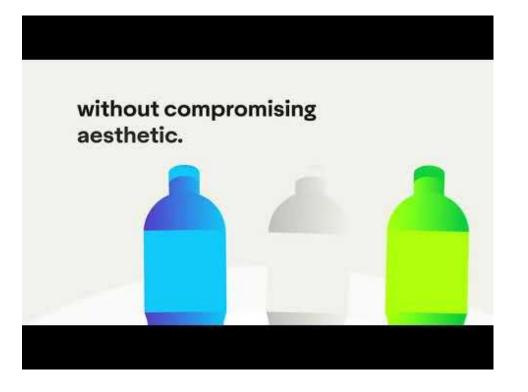
PET B2B Recycling Fundamentals

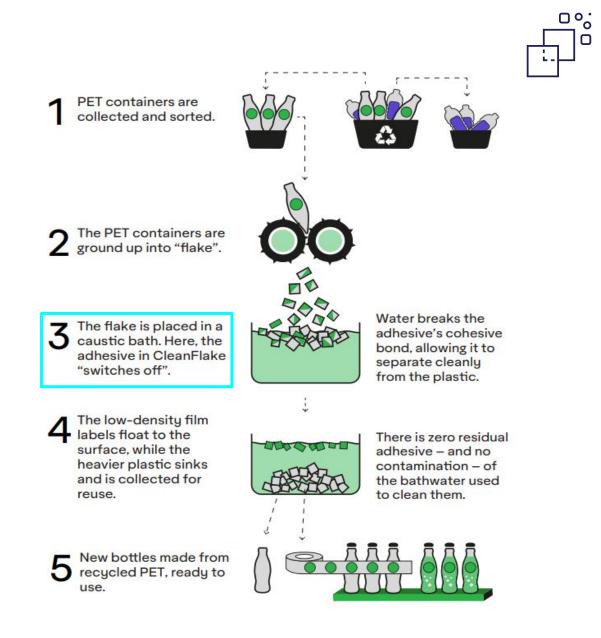
- Improves recycling of PET bottles no residue or contaminants on resulting PET flakes
- Recycled PET flakes reproduce into new new food-grade quality bottles

HDPE Mono-material Recycling Fundamentals

- Labels contributes to a small percentage of total packaging weight; does not impact overall physical properties of the rHDPE pellets
- Labels can be recycled together with the HDPE bottle without impacting the recycling process

How CleanFlakeTM enables recycling? PET bottle-to-bottle recycling







Enable Recycling

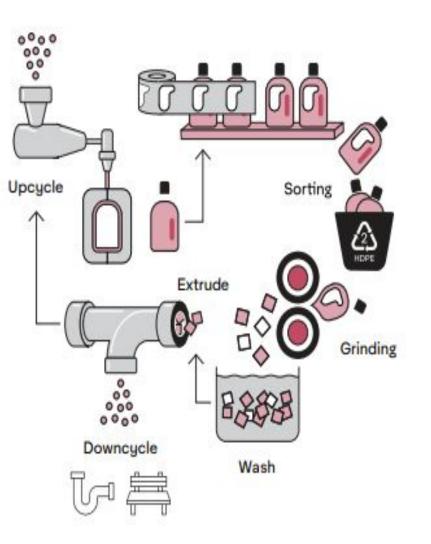
Films for HDPE Mono-material Recycling

HDPE Mono-material Recycling

- Aside from SR3013, S692N is qualified for HDPE recycling
- Recognized film facestocks
 - Clear and white BOPP films
 - Clear and white PO films
 - Clear and white PE films

Application

- Shampoo bottles
- Food & Beverage
- Laundry detergent bottles
- Motor oil bottles





Compostability





Biodegradable & Compostable Range

Key Features

- Adhesive S9500 carries the "OK Compost" certificate according to EN13432 regulations for industrial composting.
- Biodegradable & compostable
- Direct food contact approval for dry, non-fatty foods



Product Overview

• Straightforward conversion using conventional printing techniques.

Benefits

- Helps brand owners, retailers & converters meet growing demand for sustainable solutions.
- Addresses legislative requirements on landfill and sustainable packaging.

How our RFID solutions enables sustainability

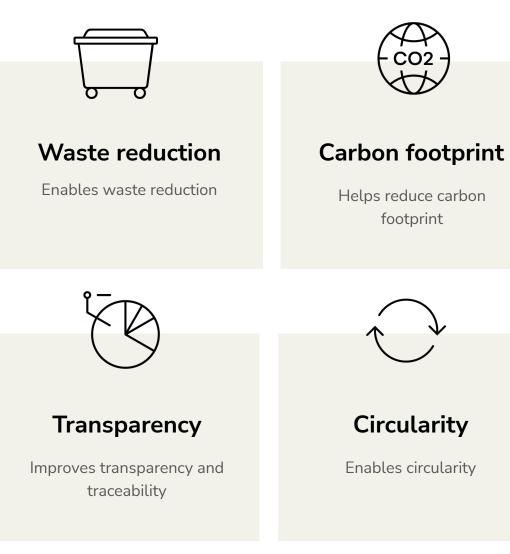
Types of RFID:

- PET/Paper based inlays
- On-Metal /Flag tag
- Microwave Safe RFID labels

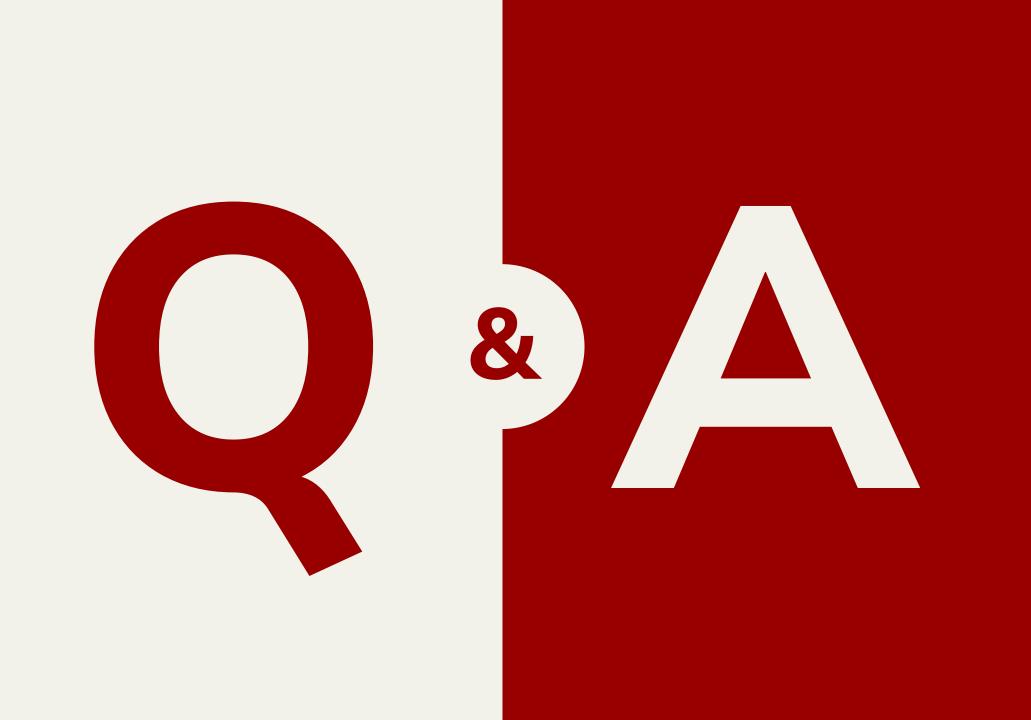




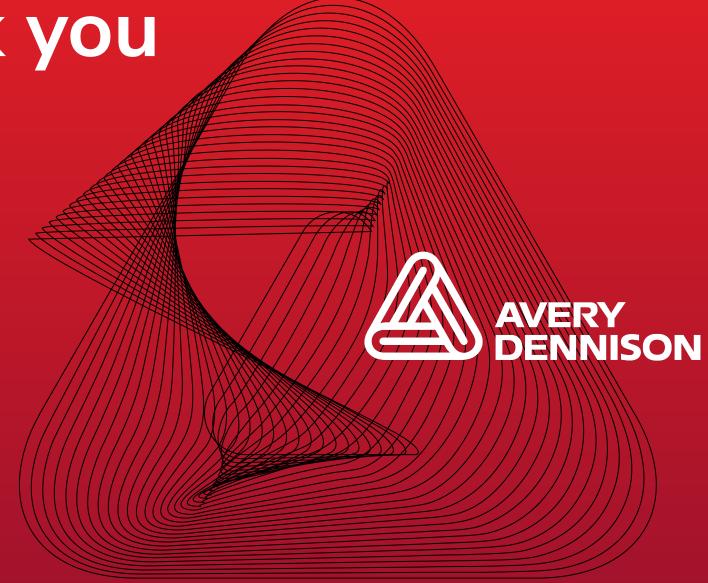




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Thank you



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