

EB Technology Applied to the Uteco CI Flexo Process



Flexible innovator solution provider.

Strictly confidential | www.uteco.com

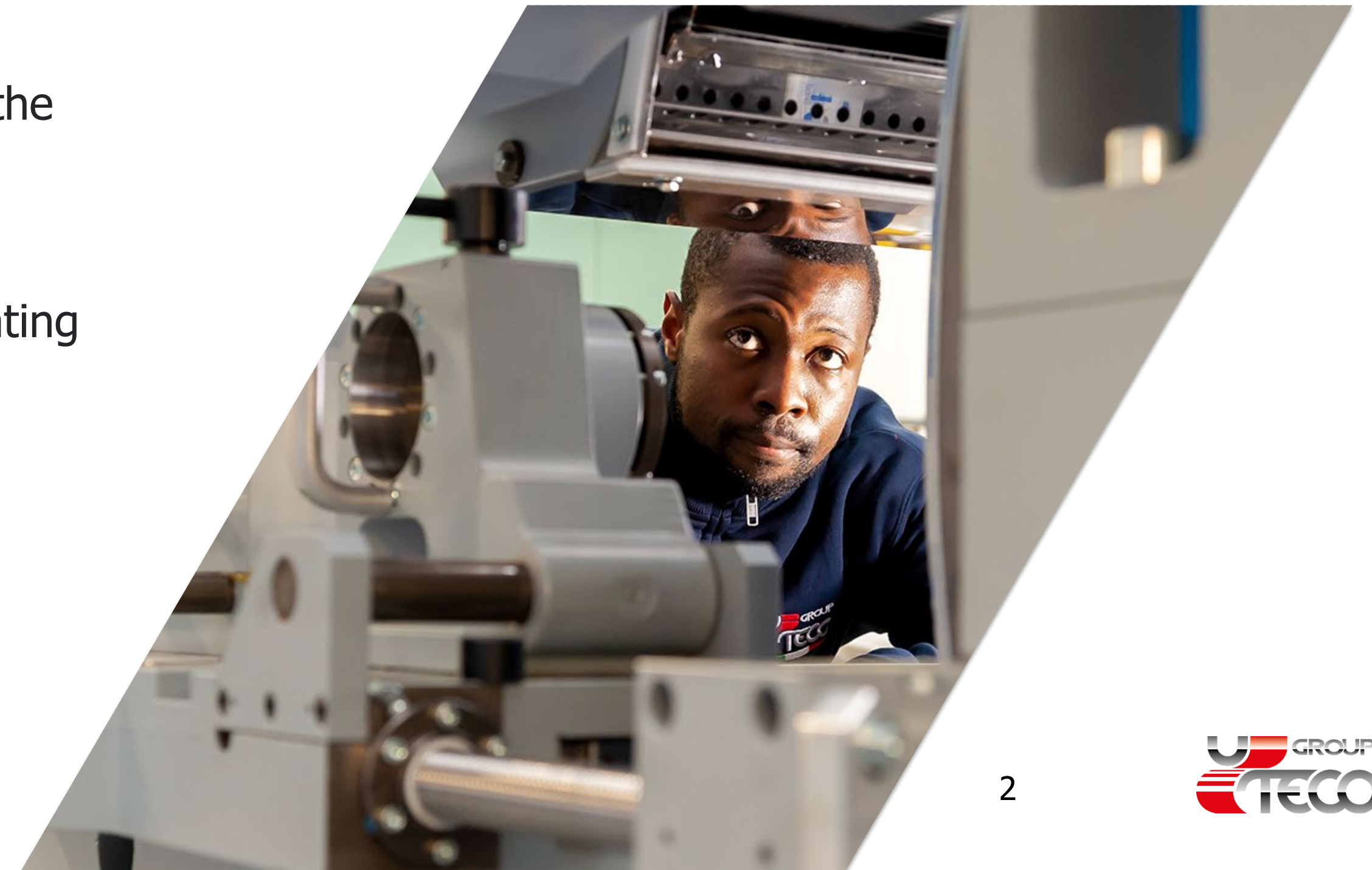


Uteco Converting S.p.A.

We are Italy's leading manufacturer of bespoke printers and converting machines catering to a wide range of industry needs.

We guarantee quality with our **Made in Italy** hallmark, pursuing excellence at every step of the production process and establishing important collaborative international relations with a constant eye on the future.

We provide **innovative and flexible solutions** starting from a wide range of flexographic, rotogravure, digital printing, coating and laminating machines, and an additional set of **360° training and assistance services**.





U GROUP
TECO

Uteco's Offerings



Innovation

Proven R&D capabilities to constantly generate cutting edge innovation for a fast changing environment



Solution

Custom fitted state-of-the-art technologies shaped around a highly demanding market



Service

After sales service for a full lifecycle, leveraging experienced technicians and dedicated supporting programs

Uteco Worldwide

US Headquarter

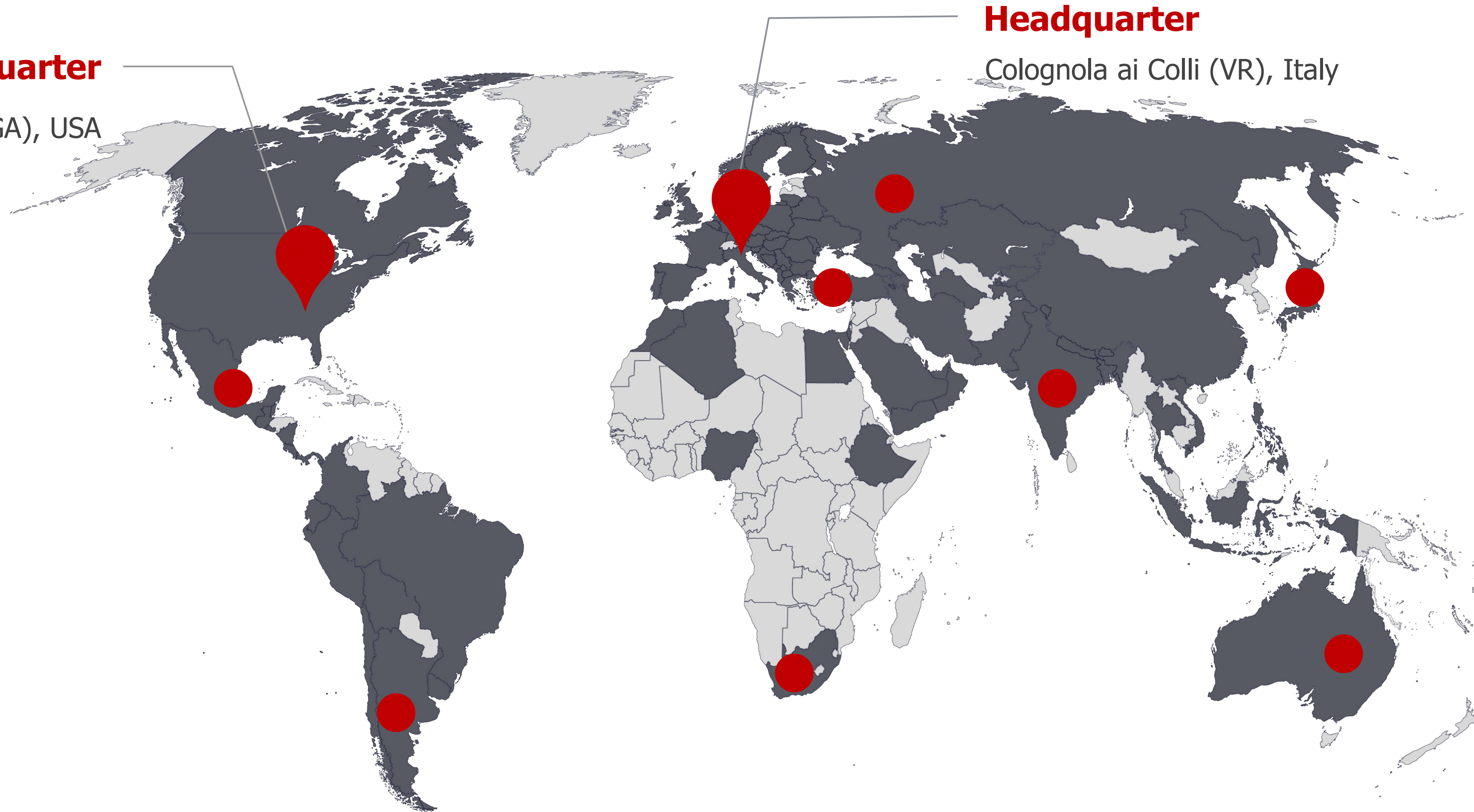
Atlanta (GA), USA

Headquarter

Colognola ai Colli (VR), Italy

● Service Point

■ Sales Network





Flexo

We provide seven flexo press lines ranging from those dedicated to the very short runs, such as the compact Onyx XS, to long runs, such as Diamond HP and Crystal machines.

Rotogravure

The Next 450, Next 350 and NXS 300 lines highlight our innovation process: providing the highest print quality and customizability according to market demands.

Coating & Laminating

Our coating and laminating lines are all supplied with integrated multi-process accessories such as solvent-based, solventless or water-based technologies.

Digital

The Uteco Sapphire EVO line is the latest generation of digital printing machines for flexible packaging equipped with the sustainable Kodak Stream and Ultrastream technologies.

Uteco at a Glance



30 100 sqm

Total area (production and offices)



350 employees

From design and prototyping to production, assistance and sales



More than € 100 M

Revenue in 2020



3 250

Machines installed worldwide

Packaging

Types of Packaging and Different Applications



For Each Product the Appropriate Packaging

In today's world, packaging represents the product.

The diversity of materials used to contain and protect specific goods allows for a seamless transformation from raw materials to finished products.

This bridges the gap between producer and consumer and represents the brand.

Primary Packaging



Secondary Packaging



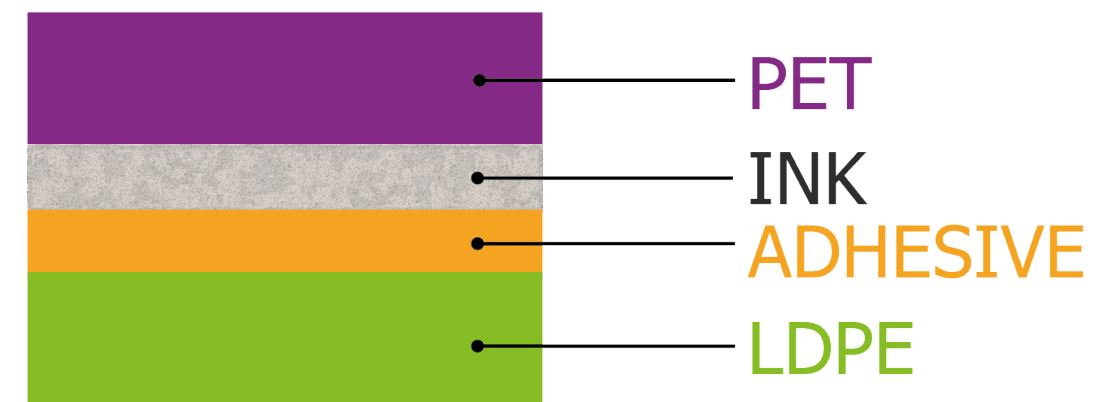
Tertiary Packaging



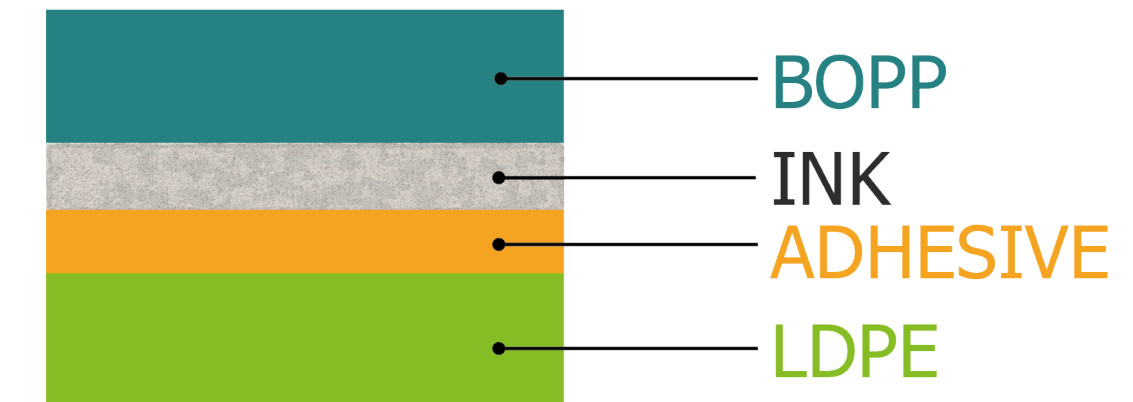
Food & Beverage Packaging

Primary Packaging

Common Packaging Structure



Common Packaging Structure



Examples of Applications



Powder/Liquid Detergent



Wet Wipes



Outdoor Bags



Fertilizer Bag



Pet Feed



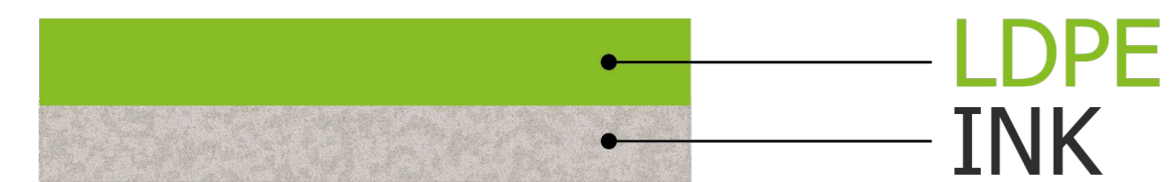
Powder Detergent

Primary Packaging

Common Packaging Structure



Common Packaging Structure



Examples of Applications



Diapers Bag



Diaper Film



Outdoor Bags



Napkins



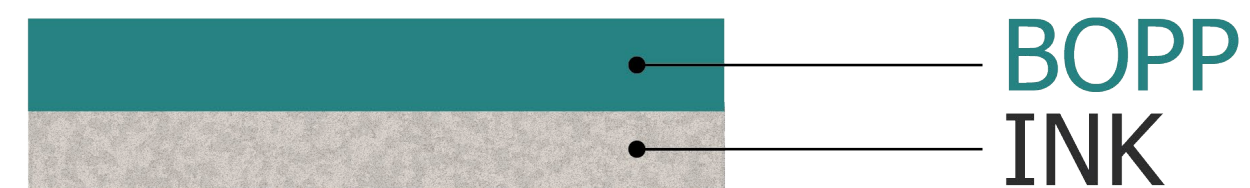
Toilet Paper



Kitchen Paper

Secondary Packaging

Common Packaging Structure



Examples of Applications



Multipack



Cardboard Box



Tertiary Packaging

Common Packaging Structure



INK
Cardboard/corrugated

Examples of Applications



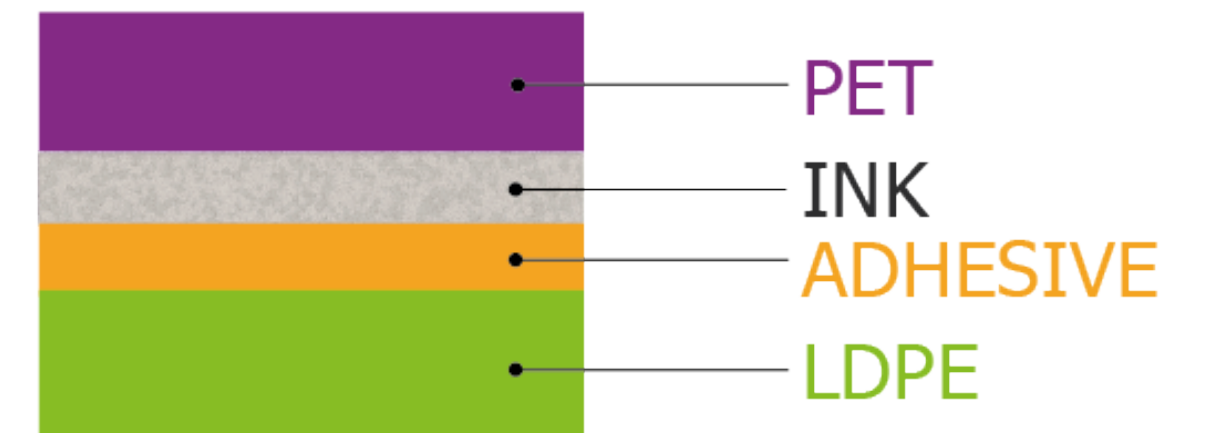
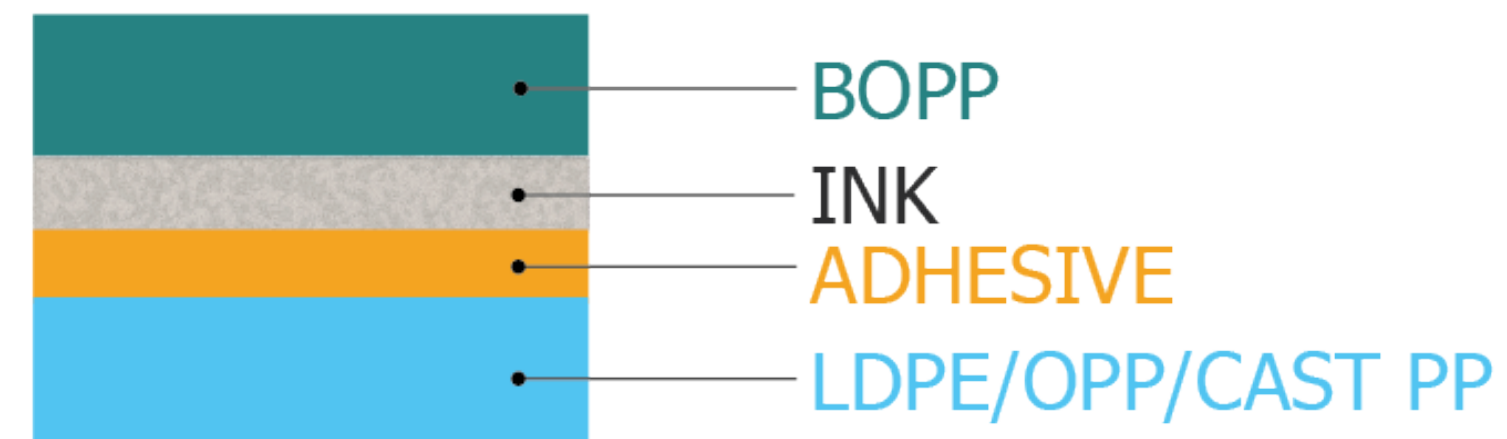
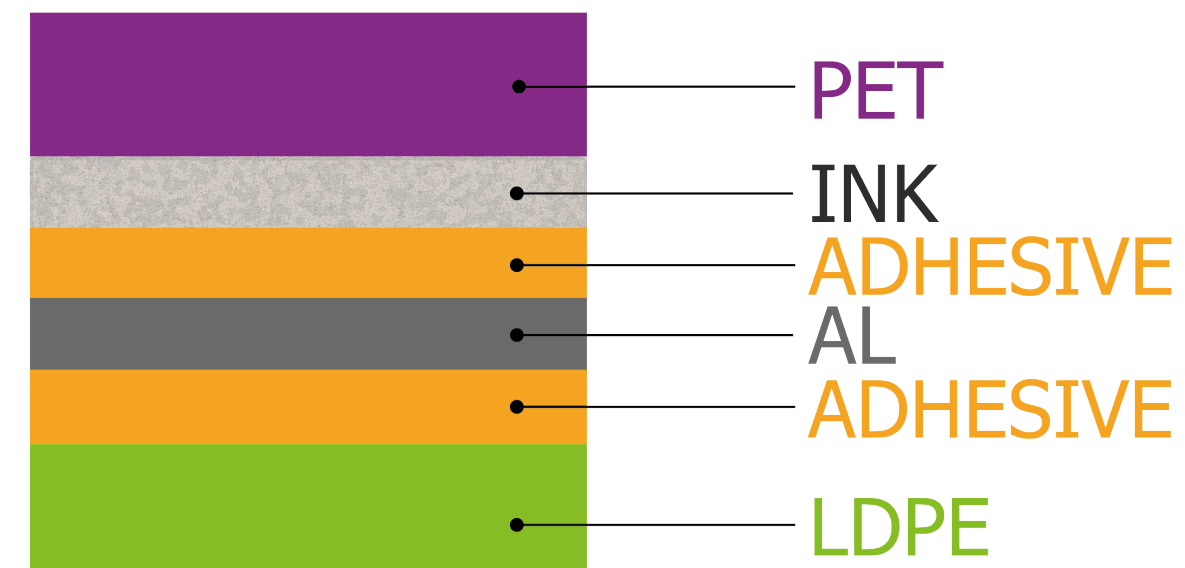
Cardboard Box



Corrugated Box

Food & Beverage Packaging

Common Packaging Structures



Examples of Applications



Doy Pack



Single Use Pack



Freeze Dry Food



Coffee

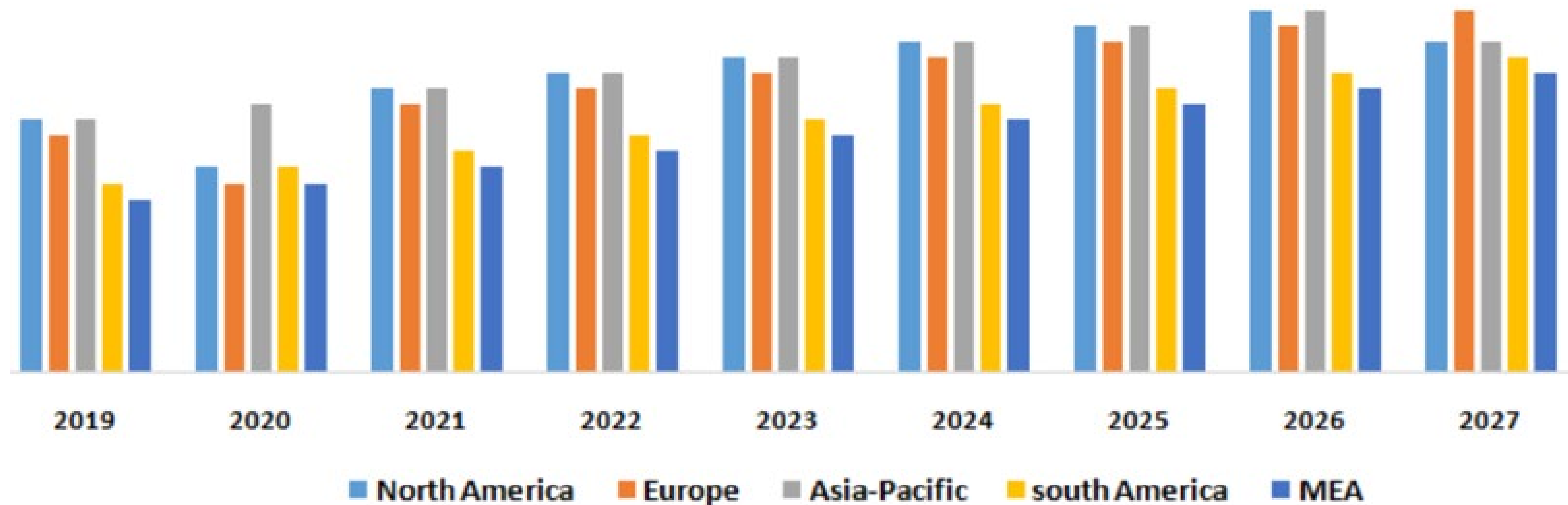
Food & Beverage Packaging Compliance

All kind of packaging structures are Food Packaging Compliant **only** if verified for migration using testing protocols appropriate to the packaged food according to **EU Regulation EC 1935/2004, FDA and Swiss Ordinance.**

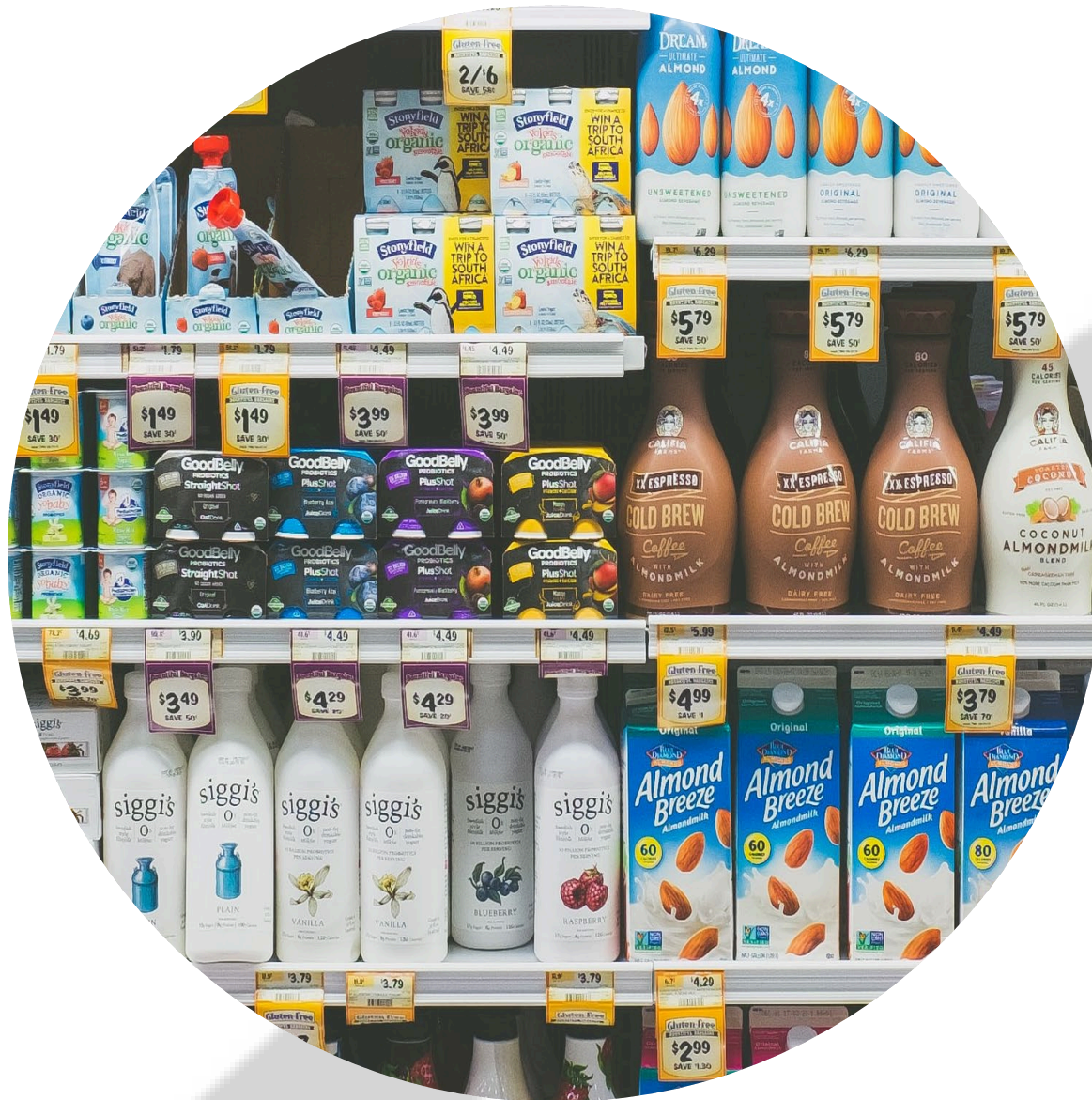
Estimated Growth of Packaging



Global Flexible Packaging Market, By Region
2020-2027



Packaging Growth Consequence



More Packaging



More Waste

How can we be more **sustainable?**



Minimize
Plastic Usage



Reduce
Packaging Layers



Use
Less Energy



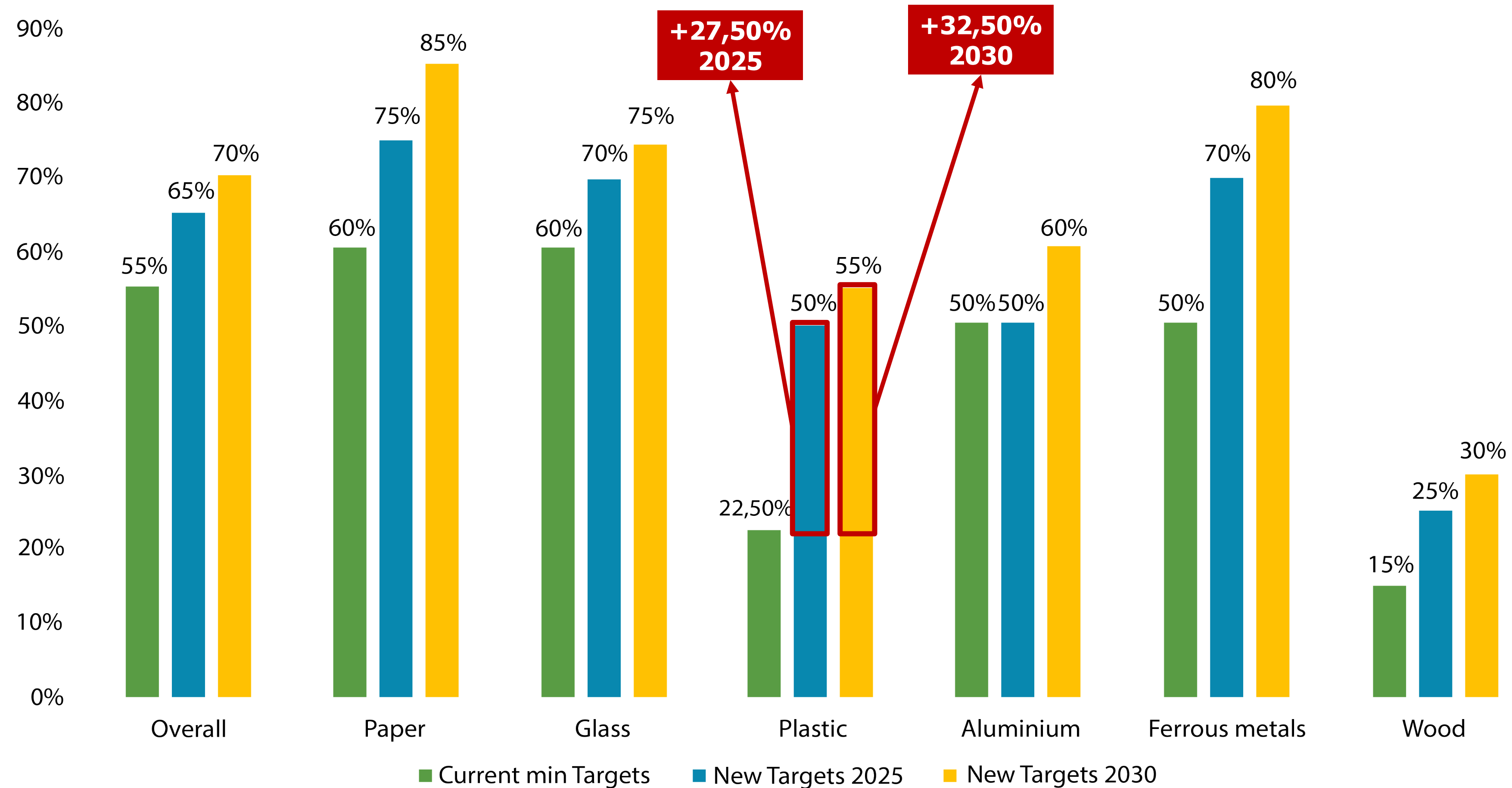
Improve
Recycle and Reuse

EU Waste Legislation

The member states of the European Union have recently approved a series of ambitious measures to adapt EU waste legislation to future challenges, in the broader perspective of the EU circular economy policy. The new rules, proposed on the proposals that the Commission presented in December 2015 as part of the circular economy package, will help to produce less waste and, when this is not possible, to substantially increase the recycling of municipal waste and waste. packaging waste. It will gradually reduce landfill practice and promote the use of economic instruments, such as extended producer responsibility schemes.

The new legislation strengthens the "waste hierarchy" by requiring Member States to take specific measures that prioritize prevention, reuse and recycling over landfill and incineration, making the circular economy a reality. In detail, the rules are household waste recycling targets of 55% by 2025, 60% by 2030 and 65% by 2035. For packaging waste, 65% recycling is expected by 2025 and 70% by 2030 for all types of packaging, with different targets by material. For plastic packaging waste, the target is 50% recycling by 2025 and 55% by 2030; 25% and 30% respectively for wood; 70% by 2025 and 80% by 2030 for ferrous metals. And again: recycling targets for aluminum packaging of 50% by 2025 and 60% by 2030; for glass, 70% by 2025 and 75% by 2030; for paper and cardboard, recycling of 75% by 2025 and 85% by 2030. The new rules on separate collection, expanding the existing obligation to separate paper and cardboard, glass, metals and plastics, will improve the quality of materials and they will further spread their use: by 2022 hazardous household waste will be acquired, organic waste by 2023 and textiles by 2025. By 2035 the municipal waste disposed of in landfills can be reduced, to constitute a maximum of 10% of the total municipal waste produced. The new rules is a greater use of economic tools and other proven measures to facilitate the application of the waste hierarchy.

Recycling Target



EU Packaging Recycling Targets

What Global Brand Owners Say



88%

Of recyclable, compostable or biodegradable products.

<https://www.pepsico.com/sustainability/focus-areas/packaging>



-50%

Use of virgin plastic in packaging.

<https://us.pg.com/environmental-sustainability/>



100%

Of all Nestlé packaging will be recyclable or reusable by 2025.

<https://www.nestle.com/randd/sustainability>

Recyclability

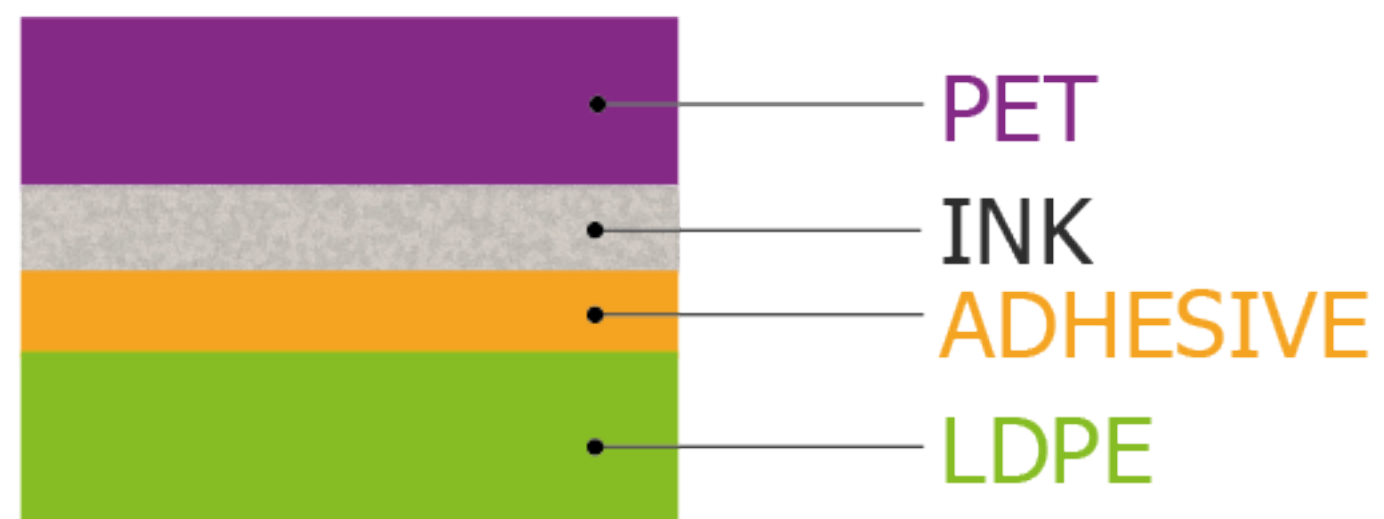
Recyclable packaging, EB Technology and waste reduction



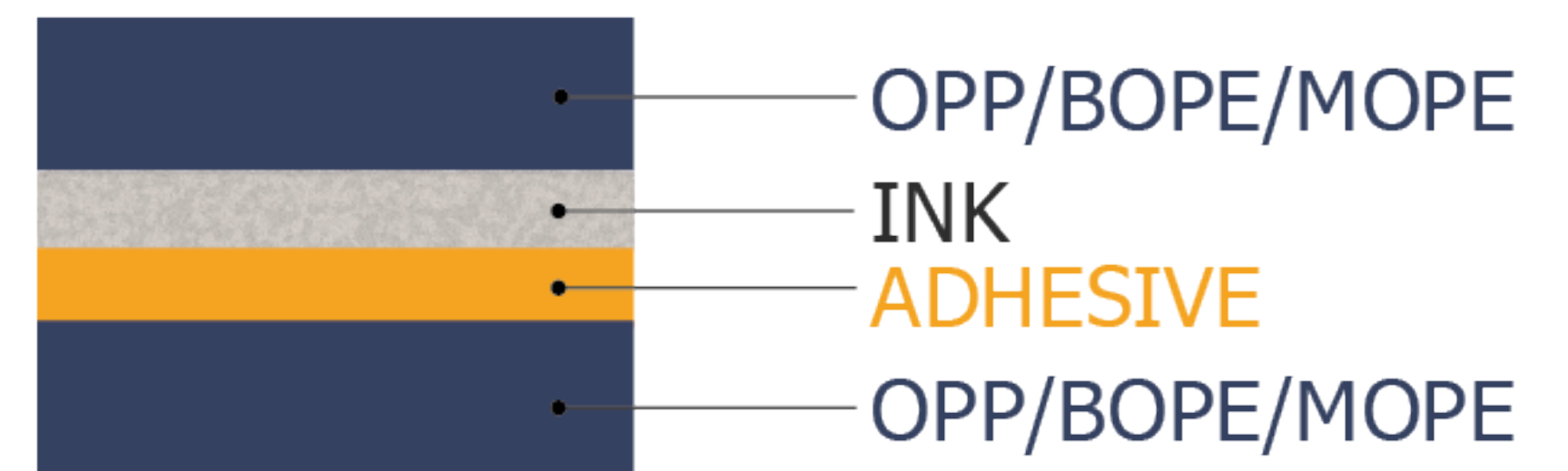
Recyclable Packaging

The Target: To obtain a recyclable packaging is necessary to substitute currently used structures with mono-type substrates

Common Packaging Structure



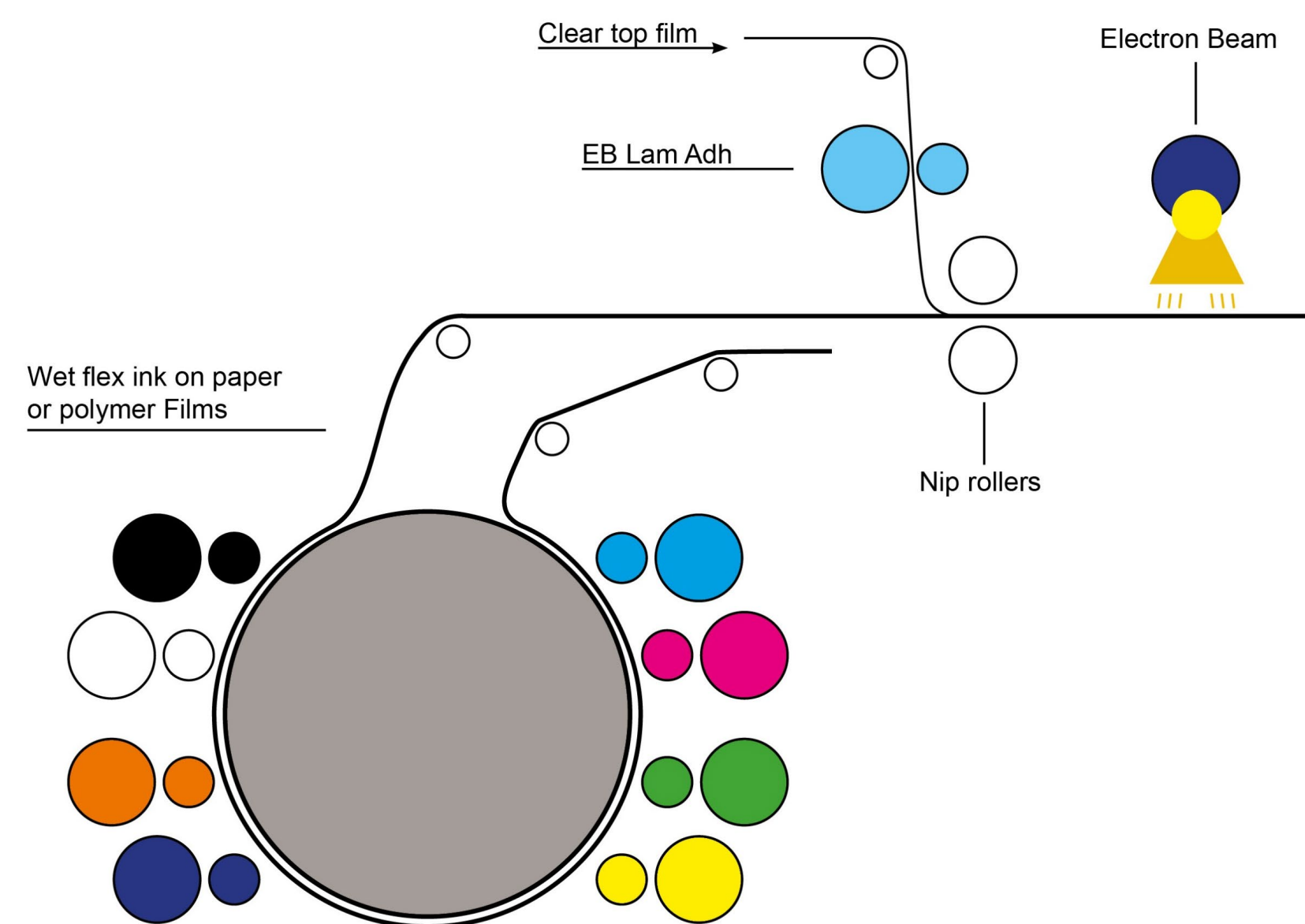
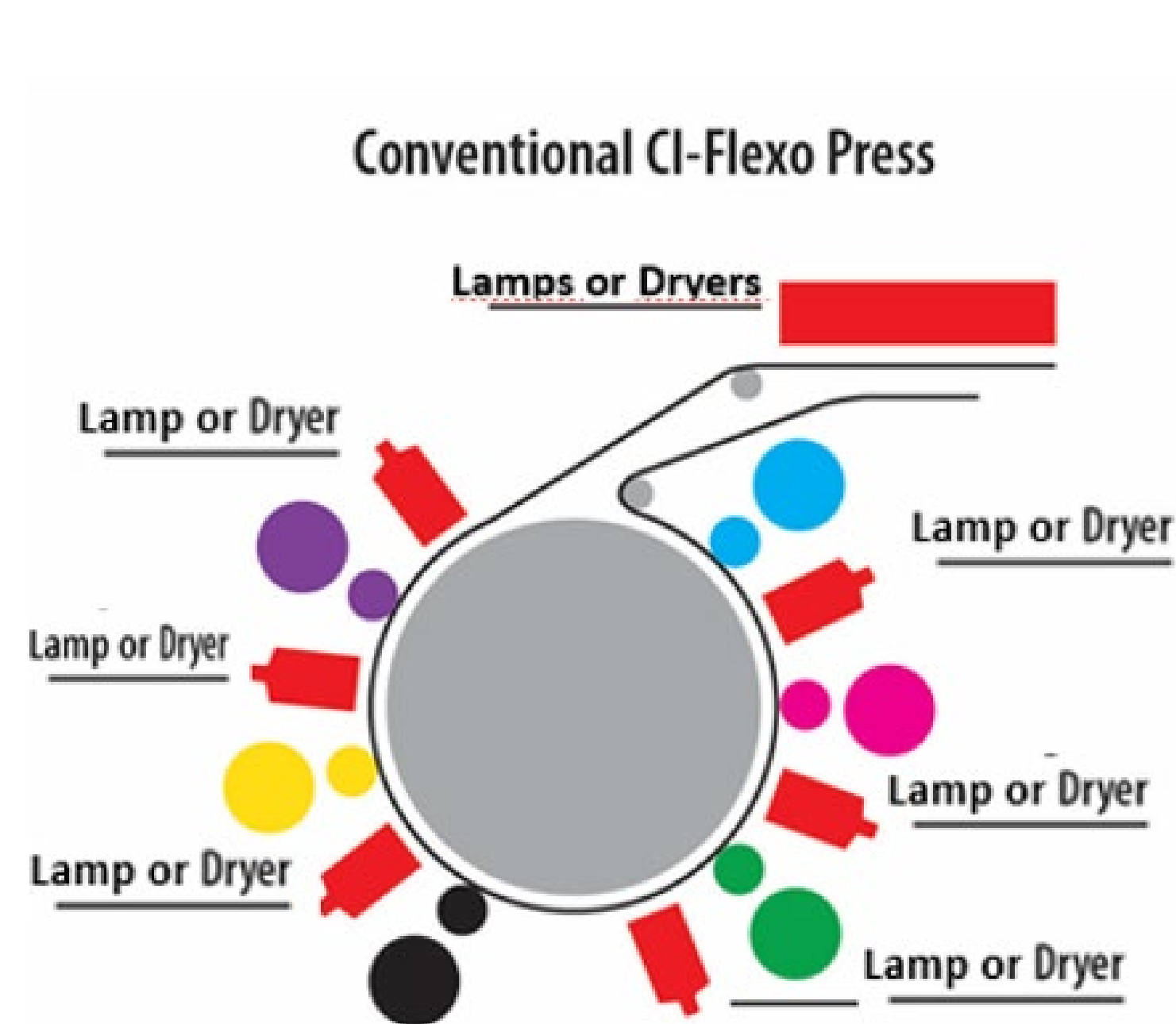
New Packaging Structure



100% Recyclable

EB Technology Applied to the CI Flexo Process

What is the technology that allows us to achieve sustainability goals?



Benefits of EB Technology Applied to the CI Flexo Process



Minimizing of energy consumption



Waste reduction



Fully VOC free



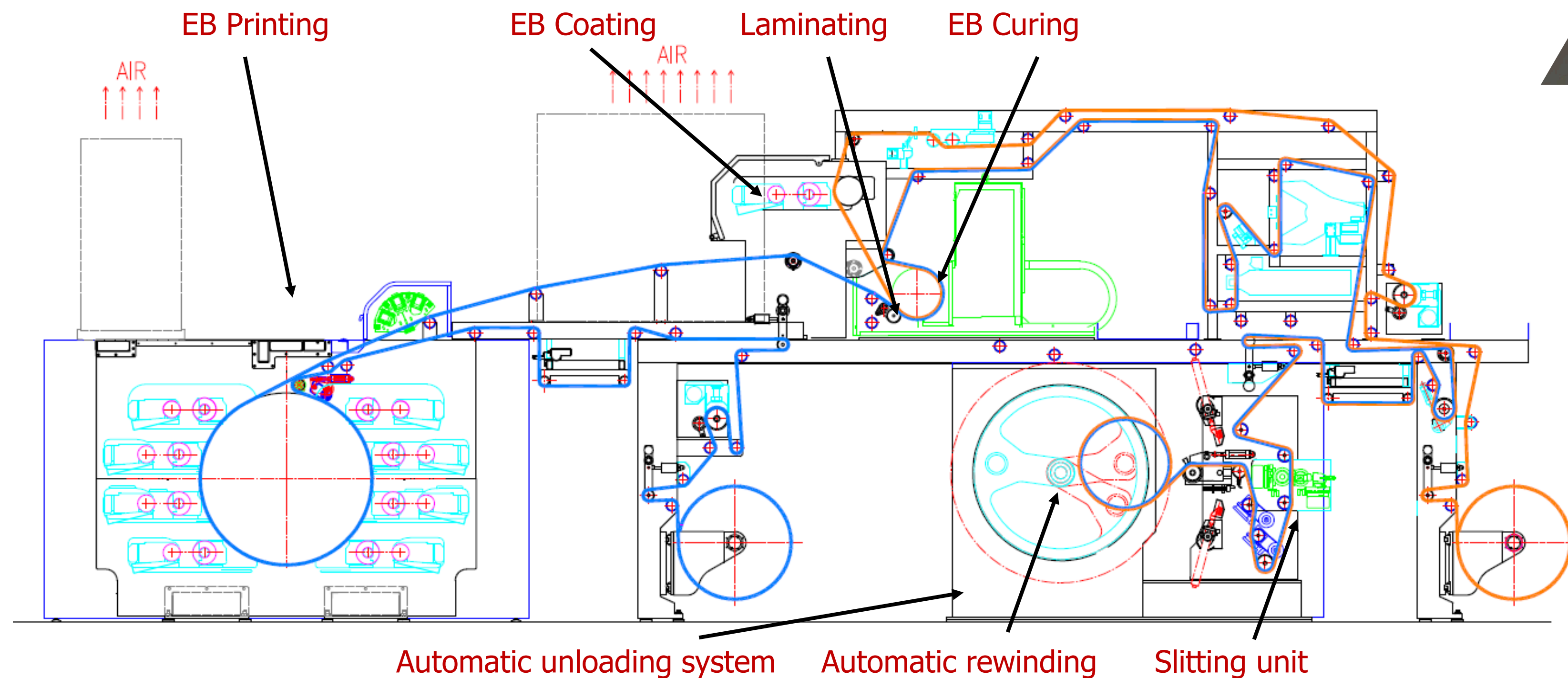
Operation security



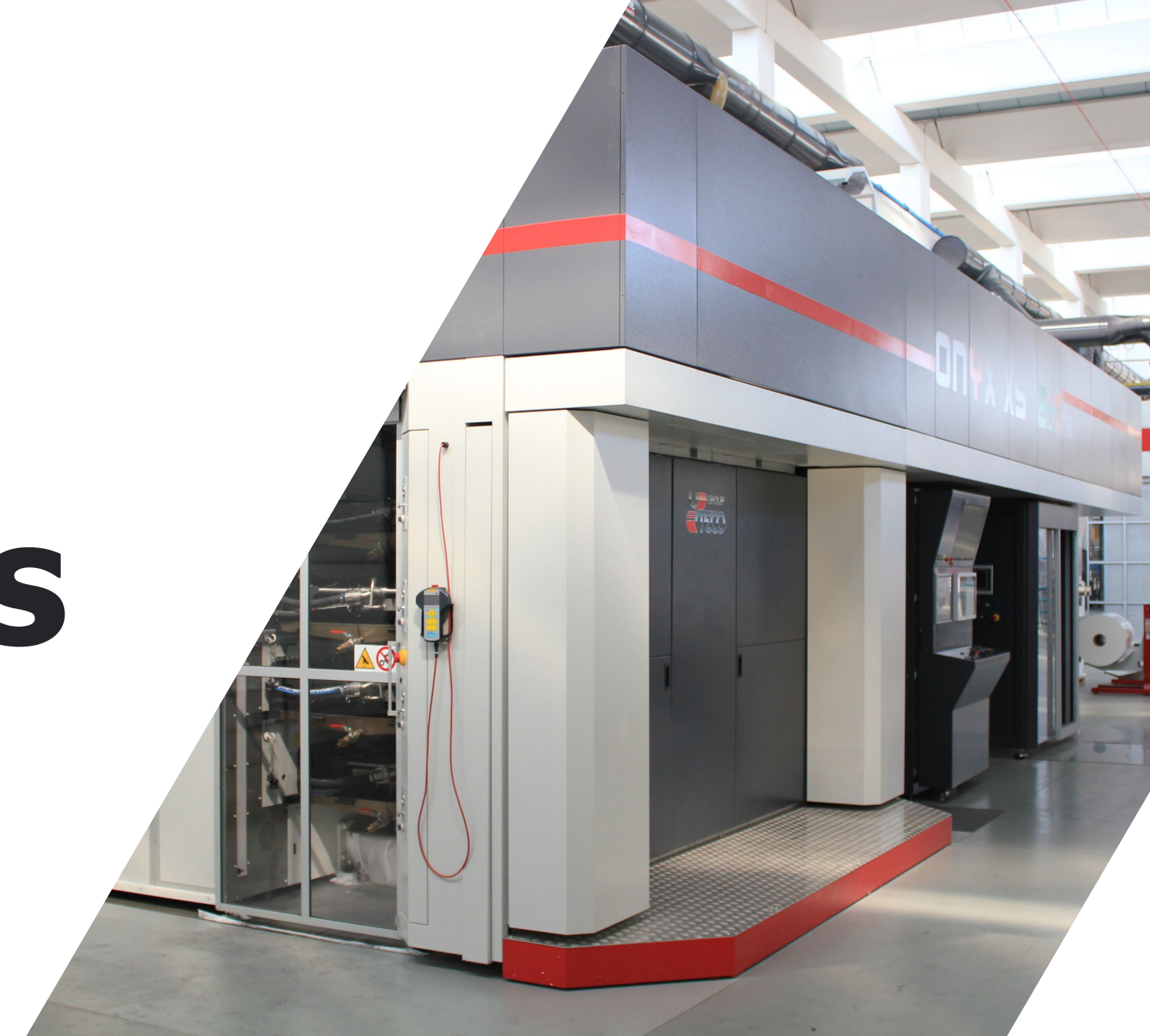
Less water and solvent usage

EB Technology Applied to the CI Flexo Process

With EB technology we can get more processes in line



EB Technology Applied to the UTECO CI Flexo Process



Onyx XS EcoOne is a flexo printing press with 4 different processes integrated in-line:

EB flexo printing with a EB lamination in line, plus an automatic slitting unit and fully automatic unloading system for multi-reels delivery thanks to the new automatic rewinding with integrated unloading system for the final reels.





Thermilox®

The patented Thermilox® system is applicable to EB and UV flexo presses in order to guarantee the accurate and continuous control of ink temperature during the print run.



Inks temperature without Thermilox®

Inks temperature with Thermilox®

EB Packaging Application Space

Surface Print Applications

- Aluminum: yogurt lids, pharma foil, pet food and sterilizable food lids using, optionally with coating (required only for sterilized packaging)
- Clear substrates: OPP, PET - with white with specialized coatings lamination replacement – EB sterilization coating
- Opaque films: PE (diaper lining, outdoor sacks – with coating), OPP (snack food, in-mold label) – with coating, PET (yogurt lidding) – with coating
- Paper, board and PE coated beverage carton - optionally with coating

Reverse Print Applications

- MOPE,BOPE, OPP, chem PET, corona PET (standard OPP/OPP, PET/PE or new OPE/PE also laminations with solventless adhesive).
- Shrink films: PETG, OPS, PVC.

EB Technology Table Comparison

Solvent

Ability to print multi-layer mono-material RECYCLABLE films

Reverse print lamination

Surface print lamination substitute –
Use less plastic

Water

Ability to print multi-layer mono-material RECYCLABLE films

Reverse print lamination

Surface print lamination substitute –
Use less plastic

No VOC and solvents

EB

Ability to print multi-layer mono-material RECYCLABLE films

Reverse print lamination

Surface print lamination substitute –
Use less plastic

No VOC and solvents

Increase in heat resistance of film

No carbon footprint

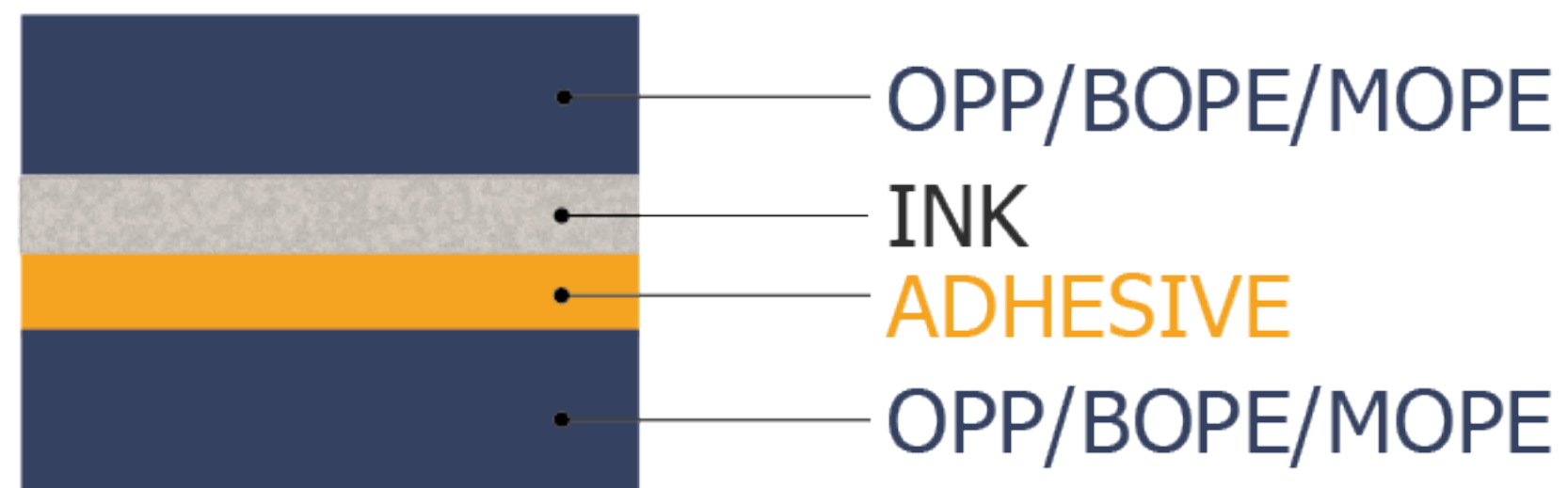
High ink properties
(gloss, scuff, chemical, abrasion)

The Most Sustainable CI-flexo Technology

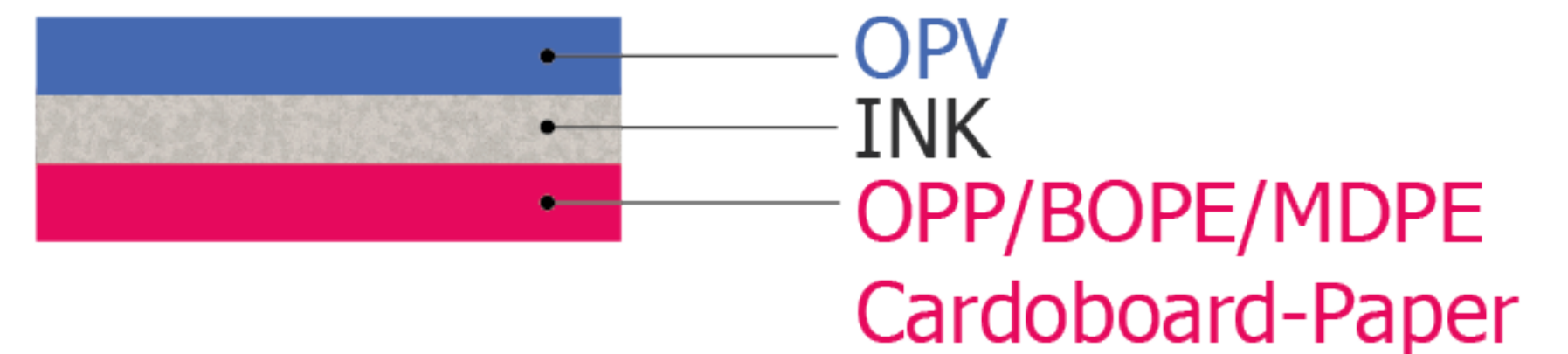
EB Technology Applied to the CI Flexo Process

With features offered by EB technology we can also use a mono-layer

Common Multi Layer Packaging Structure



Mono Layer Packaging Structure



Conclusion



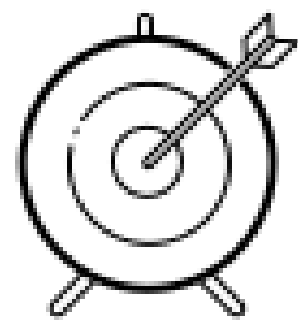
Sustainability

Aiming for a greener world.



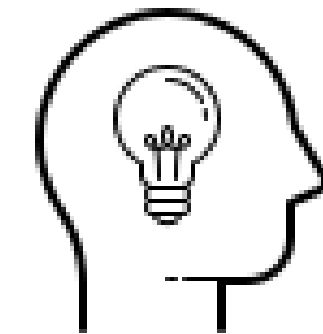
Future

Guaranteeing a better future for generations to come.



Opportunity

Unique opportunity for sustainable packaging.



Development

Investing in developing such revolutionary technologies further.

Leading the World to a Greener Tomorrow!

For any questions:
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