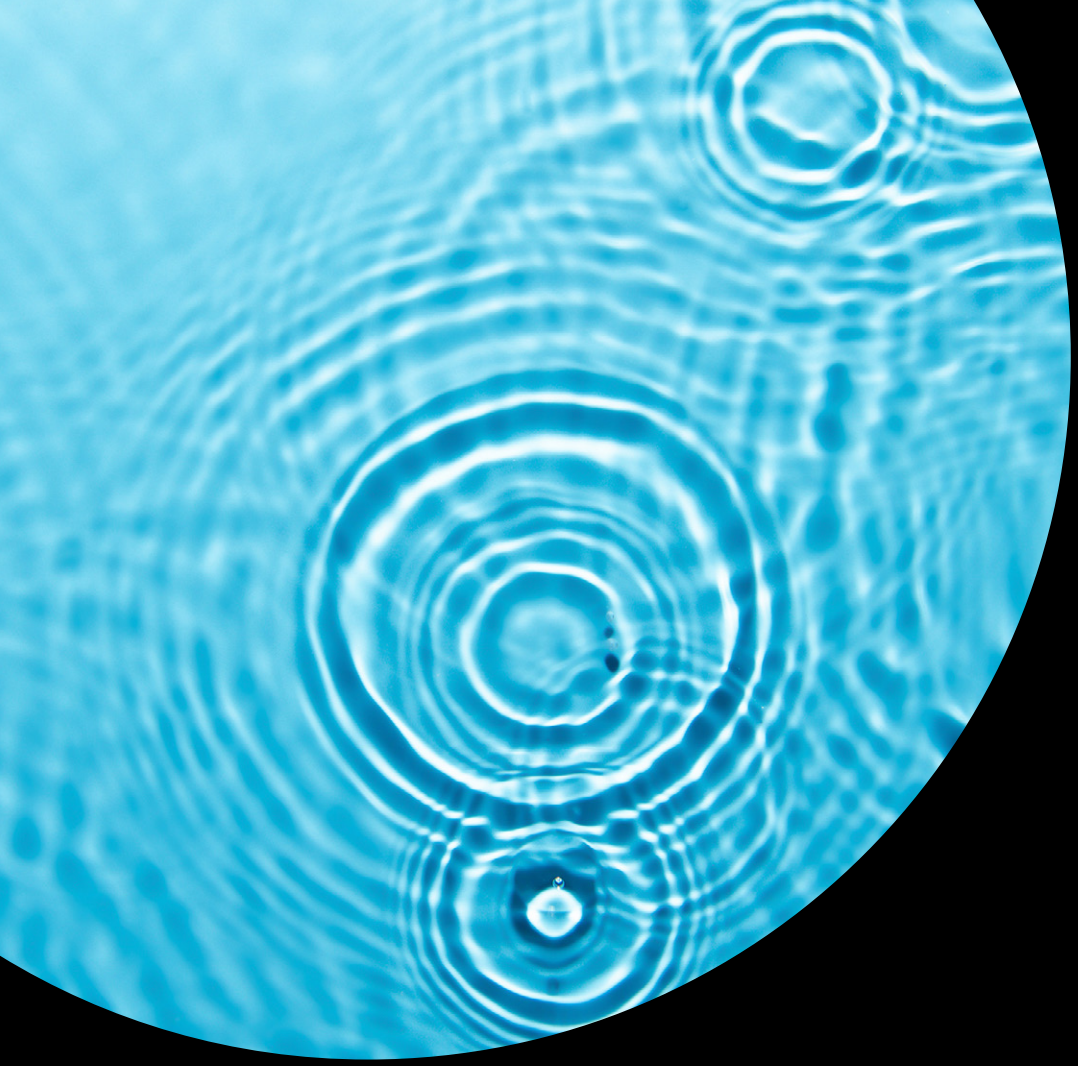

NEXTUP EXPERT INTERVIEW

An interview with **Christos Lecou**, Marketing Manager Adhesives, Printing & Packaging, Covestro

Turning the PPWR into packaging innovation

The EU's Packaging and Packaging Waste Regulation (PPWR) is transforming how packaging is designed, produced, and recycled. Christos Lecou explains how these regulatory requirements can be turned into competitive advantage.

NEXTUP WITH CHRISTOS LECOU

Balancing recyclability, performance, and efficiency under the EU PPWR

1

Question 1:

What are the key hurdles facing packaging companies with the new PPWR and what approaches can help overcome these?

The PPWR aims to prevent unnecessary waste[1], lower dependency on virgin materials, and increase the recyclability of packaging products. Many manufacturers are already working towards these goals, in response to growing consumer demand for more sustainable end-products. But with the PPWR, this will become a necessity, rather than a 'nice to have'.

For packaging manufacturers, a key challenge will be balancing improved sustainability with performance requirements: protecting and preserving products, maintaining food safety, and delivering convenience and appeal to consumers. For instance, flexible packaging laminated with aluminum provides excellent moisture and oxygen barrier protection for food.
At the same time, it is very difficult to recycle those composites mechanically. Removing the aluminum layers improves recyclability but makes it more difficult to prevent packed food from potentially migrating substances or environmental impacts. To not conflict with material reduction goals, the right packaging composition needs to be chosen, avoiding thicker plastic layers which otherwise would result in a higher use of resources.

What's more, packaging regulations, coating technologies, and available recycling methods continue to evolve – meaning that the materials that best help manufacturers comply with the PPWR could still change.

> Packaging manufacturers need to be prepared with solutions for multiple scenarios. That's where a broad portfolio and the right partnerships make all the difference.

1 The Regulation - EU - 2025/40 aims to prevent unnecessary waste by reducing packaging waste per capita (5% reduction by 2030, 10% reduction by 2035 and 15% reduction by 2040, compared to 2018)

In this environment, manufacturers need to be prepared with solutions for multiple scenarios, substrates, and recycling streams. This is why we offer a broad portfolio of adhesives, inks, and coating resins. Many of them are already designed and tested for improving recyclability of the target substrates (especially PE, PP or paper waste streams).

For example, **barrier-coating resins** specifically designed for paper recycling showcase high recycling yields of paper fibers[2], at the same time as offering the required heat resistance, water barrier properties and heat sealability.

We also offer PU-based inks that are better suited to recycling because they don't darken polyolefine substrates during the recycling process. **Uradil® FP-9300** heat-sealable coating resin offers an alternative to PVdC coatings in flexible BOPP packaging and is designed for compatibility with PP recycling streams. And many of the solutions we offer support the creation of **monomaterial** flexible packaging.

For multi-material laminates that are already in use, our research into **debonding technologies for PU-adhered laminates** explores how the layers in multi-material flexible packaging can be separated at end of life using water, natural substances, and heat. This allows each material to enter its own recycling stream rather than being sent to landfill or incineration.

2

Question 2:

How can we help ensure operational efficiency to boost business success when making packaging more sustainable?

Switching to more recyclable packaging structures can impact production efficiency. Therefore, meeting sustainability and performance needs while maintaining operational efficiency requires careful research into materials, processes, and end-use needs. Innovative coatings and adhesives solutions can help manufacturers to maintain efficiency when switching materials.

For instance, monomaterial biaxially oriented polyethylene (BOPE) films must be applied at lower temperatures for longer than with traditional biaxially oriented polyethylene terephthalate (BOPET) films, slowing production down. Heat-resistant coatings can help manufacturers to speed up application. Likewise, strong adhesives that can be applied in lower amounts reduce the required drying time.

As a resin supplier, we at Covestro offer solutions for multiple packaging layers, to help our customers maintain operational efficiency, as well making it easier to formulate coatings using these solutions. For instance, our barrier coating resins can be utilized for formulations applied to paper substrates using packaging converters' existing machinery and processes.

2 According to commissioned tests considering esp. PTS method, CEPI Recyclability Laboratory Test Method Version 2 and 4evergreen Recyclability Evaluation Protocol.

3

Question 3:

How can the chemical industry work together with other players to ease the transition to more sustainable packaging?

Navigating the PPWR's regulatory complexity will require collaboration across the whole value chain, between suppliers, converters, recyclers, and industry associations alike. Joint research, testing, certification frameworks, and shared expertise will help ensure packaging solutions remain viable as regulations evolve.

As a member of FEICA, CEFLEX, and 4evergreen, we at Covestro work to promote harmonized standards and clarity on regulation. These partnerships also help us to align our innovation activities with the direction regulations are taking, to help ourselves and our customers stay prepared. Where possible, we involve customers in R&D discussions early on to ensure new developments meet their needs.

Working with partners helps us to adapt more efficiently by avoiding duplicated efforts. It also allows us to develop proof-of-concept solutions that can help our customers demonstrate to their customers that a solution is commercially and functionally viable, and ready for recycling. In the end, this isn't just about easing the way – it's about turning challenges into opportunities to up our game!

“Navigating the PPWR's regulatory complexity will require collaboration between suppliers, converters, recyclers, and industry associations. Joint research, testing, certification frameworks, and shared expertise will help ensure packaging solutions remain viable as regulations evolve.”

NEXTUP WITH CHRISTOS LECOU

Key takeaways

Hover over the boxes below to read more:

Recyclable by design

Preserving performance

Collaboration across the value chain

Interested in learning more?
Contact Christos and our other packaging and print experts!

Covestro Deutschland AG
Kaiser-Wilhelm-Allee 60
51373 Leverkusen
Germany

statusnext.covestro.com

Edition: 2026