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WHITEPAPER

Navigating the Future: A Guide to EU Packaging Related Regulations

Introduction

The new EU Packaging and Packing Waste Regulation (PPWR) and growing Extended Producer Responsibility (EPR) laws are changing packaging rules. This white paper gives advice on how to adapt to these changes. It highlights the benefits of reusable packaging in the supply chain, including cutting down on new materials and lowering fees and taxes, to help businesses succeed in a sustainability-focused environment.

What is driving the Legislation?

The EU Packaging Regulations are in response to the environmental issues caused by single-use packaging. They promote waste reduction, reuse, recycling, and sustainable alternatives based on circular economy principles. Their goal is to reduce pollution and encourage positive environmental change.

What are the EU Packaging Regulations?

The PPWR entered into force in February 2025. This new regulation is part of the European Green Deal to tackle packaging waste issues. The PPWR replaces the Packaging and Packaging Waste Directive (PPWD) making requirements more stringent and ensuring consistency of approach to packaging and packaging waste across EU states. Its focus is to reduce excessive packaging, promote a circular economy, boost reuse rates, and encourage the use of recycled materials in new packaging.

180 kg

of packaging waste per person, per year is generated by Europeans

46%

projected increase in plastic packaging waste by 2030 without further action*

*Source: European Commission Press Corner

Extended Producer Responsibility (EPR)

The PPWR now provides a more structured approach to EPR which requires producers and users to be financially responsible for their packaging from cradle to grave and help reduce waste to landfill. This shift aims to promote sustainable packaging practices and promote a circular economy model.

By aligning with EPR principles, the reform addresses environmental impacts and promotes producer adoption of sustainable practices for a resilient, resource-efficient future.

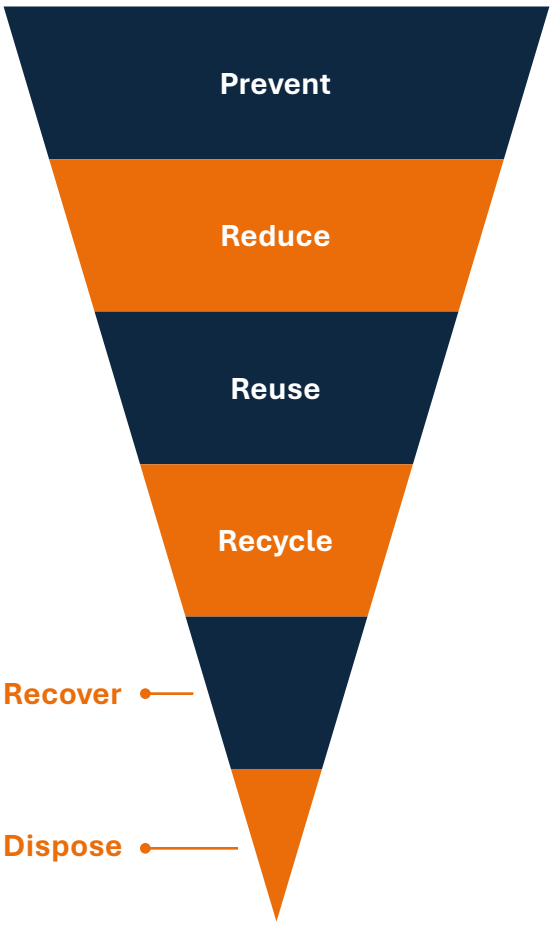
***EPR** usually involves eco-modulated fees, where eco-friendly packaging has lower associated fees. Reusable packaging is typically exempt, promoting reuse over recycling.*

Understanding packaging

Not all packaging is the same. It's important to understand the differences between primary (direct product encasement), secondary (additional protection for grouped transportation packaging), and tertiary (bulk transport) packaging. The new regulations affect each type differently.

The focus of the regulations is to drive a shift from single- use items like nets, bags, trays or other containers for fresh produce to reusable options for secondary and tertiary packaging.

Examples of this type of reusable packaging include reusable plastic crates (RPCs), plastic pallets, and plastic bulk containers.



Key Regulation Insights

The PPWR represents a significant shift in the way packaging is designed, utilised and packaging waste is managed. For the first time the **prevent**, **reduce** and **reuse** elements of the waste hierarchy are given as much priority as recycling - which has been the default solution for many years. People forget that recycling activities also have an environmental impact, albeit a smaller one than the impacts resulting from the creation of the virgin material.

1. Reduction Targets for a Circular Economy

The PPWR sets reduction targets for packaging waste at national level: **5% by 2030, 10% by 2035, and 15% by 2040**. These targets, especially aimed at reducing single- use plastic waste, will drive changes in design, consumption habits, and enforcement.

What are the implications for businesses?

Businesses must innovate and adopt sustainable practices to meet these targets. For example, one requirement is to reduce the empty space ratio in transport packaging or e-commerce packaging to less than 50%. This means companies will have to either design smaller packaging systems for their goods, or turn to pooled reusables which inherently reduce the amount of packaging needed to be produced, as reusable packaging within a system of reuse is exempt.

In addition, the PPWR bans single-use formats for grouped packaging such as grouped bottles, cans, tins, pots etc unless packaging facilitates handling, and packaging such as nets, bags, trays or other containers for unprocessed fresh fruit and vegetables (<1.5kg) by 2030. Packaging placed on the market has to be designed so that its weight and volume is reduced to the minimum necessary. All of these requirements are designed to reduce the volume of packaging produced and disposed of.

While reducing the amount of packaging is the driver of the PPWR, packaging users shouldn't forget that consideration should also be given to the function of that packaging as well: for example how packaging reduces damage to / the loss of contents of that packaging and how to manage that packaging prior to and after use.

For example, when used with liners, foldable bulk containers make it easier to empty out more product — reducing waste and improving operational efficiency.

2. Reuse and Reusable Packaging Targets

The PPWR sets reuse targets for non-cardboard transport packaging which MUST BE reusable AND within a system designed to manage, collect, clean, repair and reissue that packaging. These targets apply if goods are moved anywhere within the EU and/ or placed on the EU market. In addition, this also applies if a company (at group level) moves goods between their own sites or transports goods within the same country in the EU.

This legislation is significant as it is the first to explicitly mention "reuse," marking a major step towards embracing circular economy principles.

Understanding the value of reusable packaging for business

While cardboard is exempt from reuse requirements, reusable plastic products have a much lower environmental impact compared to the cardboard alternative, especially in respect of total water usage (**40%+ reduction**) and greenhouse gas emissions **(50%+ reduction)**.

Therefore, businesses should consider the entire lifecycle of their packaging options when making choices. Reusable items like plastic pallets, reusable plastic containers (RPCs), and foldable plastic containers are more sustainable and suitable alternatives compared to single-use options. Embracing these reusable solutions can help businesses meet regulatory requirements and achieve sustainability goals.

3. Recyclable and Recycled Content

The Regulation sets recycled content rates and design criteria to enhance recyclability. Manufacturers must include minimum recycled content percentages, and design standards will focus on material composition, labelling, and ease of dismantling for recycling. These requirements aim to reduce waste and promote sustainability.

For non-polyethelyne terephthalate (PET) food contact packaging, targets are set at 10% recycled content by 2030 and 25% by 2040, with specific methods and exemptions to be determined in implementing acts.

Plastic transportation packaging:

By 2030:

10%
for food contact packaging (other than PET)

35%
for non-food contact

By 2040:

25%
for food contact packaging (other than PET)

65%
for non-food contact

Most Tosca reusable secondary and tertiary packaging options already contain over 30% recycled content ensuring immediate compliance with the regulations.

What Are the Hidden Benefits of the PPWR?

Adhering to the new and updated regulations will drive benefits to businesses across supply chains, both for sustainability and for their operations. These include:

1. Reduction in Greenhouse Gas Emissions

The reforms will result in a substantial decrease in emissions by curbing virgin plastic production and improving recycling processes. Shifting from single-use plastics to reusable options that are designed for recycling reduces the demand for virgin plastic. Additionally, reusable plastic packaging provides better protection, minimising food damage and improving product quality meaning less emissions from food going to landfill. This latter point will be a key focus in the upcoming **Waste Framework Directive** update.

2. Decrease in Water Use

Using reusable packaging leads to reduced water consumption along the value chain. For example, the manufacture and recycling of cardboard uses significant amounts of water. Using reusable plastic crates, even with their washing and sanitation, leads to significantly less water consumption across the life cycle compared to cardboard.

Our RPCs weigh approximately 2.5 times more than an equivalent-sized corrugated box, but they are used for an average of 80 trips over their service life. This means that every kilogram of plastic used to manufacture a reusable plastic crate replaces just over 25 kilograms of single-use corrugated boxes.

Although less water is required to produce cardboard than plastic on a per-kilogram basis—about one third compared to virgin plastic—when measured per trip, the reusable plastic crate uses only one tenth of the water needed to produce the 80 single-use corrugated boxes it replaces.

After accounting for water used for washing, Tosca's pooled reusable plastic crates typically allow our clients achieve a reduction in water use along the value chain by **>50%** compared to single-use cardboard.

3. Increased Cost Savings for Businesses

Businesses save costs with efficient packaging, reuse, and supply chain optimisation, reducing expenses for materials, waste management, and environmental compliance.

4. Eliminating Fees and Taxes

Companies can reduce environmental taxes, such as EPR fees, by utilising third-party asset management. Pooling resources minimises tax on usage, as seen in Spain, where reusing packaging items such as in a pooled approach is more cost effective than opting for a single use alternative, inherently promoting waste reduction. Even in the UK where an EPR fee is charged for reusable packaging (its 'maiden voyage'), payment of fees can be reduced because subsequent usage is free from extra charges, emphasising reusability's waste-reducing benefits.

Introducing Reusable Plastic Packaging: Puratos' Successful Sustainable Partnership with Tosca

Puratos, a global food industry leader, prioritises sustainability with aims for carbon neutrality by 2025 and zero waste to landfill by 2030. Collaborating with Tosca, Puratos eliminated single-use packaging, transitioning to reusable plastic packaging. This partnership showcases collaboration efforts in introducing reusable plastic packaging, optimising supply chains, and achieving sustainability goals.

Utilising Tosca's foldable liquid Superior Hybrid IBCs, CR1 Pallets, and foldable dry bulk Magnum Optimum containers have led to the following benefits:

Plastic Reduction

61 metric tons of plastic reduced by switching to reusable Tosca load carriers.

Reduced Greenhouse Gas Emissions

Greenhouse gas emissions reduced by **87 metric tons.** That's the equivalent of taking a car off the road for 342,790 kilometres!

Energy Savings

Enough energy saved to power **44 homes.**

Water Conservation

31,461 m^3 of water saved – equivalent to 13 Olympic-sized swimming pools!

CRAI and Tosca: Reusable Packaging Partnership and Transformation

CRAI, a leading Italian supermarket retailer, partnered with Tosca to transform their operations. By adopting Tosca's folding, reusable wood-look crates for transporting produce from fields to distribution centres and stores, CRAI has achieved several sustainability benefits, including:

Savings

Greenhouse Gas

Reduced greenhouse gas emissions by **54%**, equivalent to 2.6 million km travelled by car.

Energy Consumption

Savings in energy consumption equivalent to **538 homes.**

Water Consumption

Reduction in water consumption by **42%**, or the capacity of 82 Olympic-size swimming pools.

Steps to take to increase reusable packaging

PPWR and EPR laws underscore the importance of reuse in packaging waste reduction, emphasising that recycling alone is not enough to achieve the desired outcomes. Through these Regulations, businesses are urged to adopt sustainable packaging practices and reduce single-use plastics.

Some key steps to achieve this are:

1. **Evaluate Current Packaging Across its Full Life Cycle**: Asses the compliance to the PPWR as well as the environmental impact of your current packaging across its full life cycle and identify areas for improvement.
2. **Choose Reusable Alternatives:** Select durable and reusable packaging options such as reusable plastic crates (RPCs), plastic pallets, and foldable bulk containers.
3. **Redesign for Reusability:** Ensure packaging is designed for the minimum number of uses defined by the PPWR, including easy cleaning, refill and durability.
4. **Optimise Supply Chain:** Adjust supply chain processes to incorporate reusable packaging, including efficient collection, cleaning, repair and reissuing within a reuse system. Better still look to outsource through a pooling company such as Tosca.
5. **Educate Stakeholders:** Inform customers, suppliers, and employees about the benefits and usage of reusable packaging to ensure proper implementation and acceptance.
6. **Monitor and Adjust:** Continuously monitor the performance and impact of reusable packaging and make necessary adjustments to improve efficiency and sustainability.
7. **Prioritise Reusable Packaging:** Use reusable crates and containers through a pooling model to achieve sustainability goals and align with a circular economy approach.
8. **Collaborate with Industry:** Establish supportive frameworks for reusable packaging through collaboration and innovation, increasing sustainability while maintaining business competitiveness.
9. **Innovate in Sustainable Packaging:** Invest in new materials and technologies that reduce environmental impact while maintaining product quality and cost-effectiveness.
10. **Integrate Sustainability:** Embed sustainable practices, like reusable packaging and waste reduction, into core business strategies.

Conclusion

The PPWR marks a significant shift, requiring businesses to adapt strategically and supports the various incoming and developing EPR legislation across the EU. Embracing reuse as part of that strategic shift is vital for compliance, helping businesses to thrive in a sustainability-focused environment with optimised supply chains.

How can Tosca help?

At Tosca, we're your expert partner in navigating evolving regulations and sustainability demands. Specialising in innovative reusable plastic packaging and pooling solutions, we drive cost efficiencies and sustainability across supply chains and inherently comply with all of the requirements of the PPWR.

Did you know Tosca can provide a personalised Life Cycle Analysis? Get in touch to request yours today

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Get in touch with us today and see how we can help revolutionise your supply chain with Tosca's reusable plastic packaging.

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