

Packaging and Packaging Waste Regulation (PPWR)

Background, scope, definitions, key requirements, implementation process, advocacy opportunities and business impact timeline

PREPARED BY	Regulatory Strategy Consulting Kunz Dr. Erika Kunz
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SCOPE	EU Packaging and Packaging Waste Regulation (EU) 2025/40, lifecycle packaging requirements, PPWR technical files, EPR, recycled content, recyclability, reuse and labelling
AUDIENCE	Manufacturers, importers, brand owners, retailers, packaging producers, distributors, e-commerce operators, regulatory affairs, sustainability, packaging development, procurement, logistics, legal and board-level decision-makers

CORE THESIS

PPWR transforms packaging compliance from a largely national waste-management and EPR topic into a harmonised EU market-access regime. Packaging design, recyclability, recycled content, minimisation, labelling, reuse systems, technical documentation and supply-chain data are expected to become increasingly important compliance and competitiveness considerations for senior management.

Legal note: This white paper provides general regulatory and strategic information only and does not constitute legal advice, legal interpretation or regulatory opinion. Compliance obligations depend on Regulation (EU) 2025/40, future delegated acts, implementing acts, harmonised standards, guidance documents and company-specific circumstances.

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1. Executive Summary

The Packaging and Packaging Waste Regulation (PPWR), Regulation (EU) 2025/40, was published in the Official Journal on 22 January 2025, entered into force on 11 February 2025 and generally applies from 12 August 2026. It replaces the Packaging and Packaging Waste Directive 94/62/EC with a directly applicable EU regulation. [1][2]

The PPWR establishes requirements across the full packaging lifecycle, from packaging design and composition to reuse, recycling, recycled content, labelling, extended producer responsibility, waste prevention and market surveillance. The European Commission states that the Regulation covers all packaging and packaging waste, regardless of material or origin, and that the Regulation supports the EU objective that packaging placed on the EU market should increasingly meet recyclability requirements and contribute to a circular economy model, supported by secondary legislation and implementation measures. [2][3]

For companies, PPWR is not only a packaging regulation. It creates a data, documentation and governance obligation across product development, packaging engineering, procurement, sustainability, logistics, legal, marketing, quality, EPR reporting and supplier management. [1][2]

EXECUTIVE INSIGHT

The critical transition is from packaging as a design and procurement decision to packaging as a regulated market-access asset. Companies should be prepared to maintain documented evidence supporting packaging composition, recyclability, minimisation assessments, recycled-content claims, labelling compliance and declarations of conformity where required by applicable regulatory provisions.

2. Background and Strategic Context

Packaging is a major material and waste stream in Europe. The European Commission highlights that packaging uses large quantities of primary raw materials, with 40 percent of plastics and 50 percent of paper used in the EU going into packaging, and packaging representing a significant share of municipal waste. [1][3]

PPWR responds to this challenge by harmonising requirements across the internal market and shifting packaging policy from waste management after use toward design and compliance before placing packaging on the market. [1][2]

- The legal instrument is a regulation, not a directive, which means PPWR applies directly across Member States according to its application schedule.
- The objective is to reduce packaging waste, increase recyclability, safely increase recycled plastics in packaging and reduce dependency on virgin materials.
- The Regulation affects both packaging producers and businesses placing packaged products on the EU market.
- The compliance model requires both technical evidence and operational processes, including EPR registration, supplier data and conformity documentation.

3. Scope and Core Definitions

TERM	PRACTICAL MEANING	CORPORATE IMPLICATION
Packaging	Any item used for containment, protection, handling, delivery or presentation of products, subject to the detailed PPWR definition. [1]	Almost all product sectors and packaging formats can be in scope.
Packaging waste	Packaging or packaging material that becomes waste after use. [1]	Waste-prevention and EPR obligations remain central.

TERM	PRACTICAL MEANING	CORPORATE IMPLICATION
Economic operator	A broad group potentially including manufacturers, suppliers, importers, distributors, fulfilment service providers and authorised representatives. [1]	Responsibilities must be assigned across the value chain.
Producer / manufacturer roles	PPWR uses role-specific duties depending on who places packaging or packaged products on the market. [1]	Companies need role mapping by Member State and distribution model.
Recyclable packaging	Packaging designed for recycling and capable of being collected, sorted and recycled according to specified criteria and future grades. [1][2]	Packaging design must be assessed against material-specific recyclability rules.
Reusable packaging	Packaging designed, conceived and placed on the market to accomplish multiple trips or rotations within a reuse system. [1]	Reusable claims require actual systems, tracking and performance evidence.
Technical documentation	Evidence demonstrating packaging compliance with applicable PPWR requirements. [1]	A technical file should exist for each packaging family.

4. Key PPWR Requirements

REQUIREMENT AREA	WHAT CHANGES	TYPICAL EVIDENCE	KEY FUNCTION
Packaging minimisation	Packaging weight and volume must be limited to what is necessary for functionality, safety and acceptance. [1][2]	Design justification, benchmarking, dimension and weight data.	Packaging development / R&D
Recyclability	All packaging placed on the EU market must move toward recyclability, with economic viability by 2030 as a central policy objective. [2][3]	Recyclability assessment, design-for-recycling review, material compatibility.	Packaging / sustainability
Recycled content	Plastic packaging faces minimum recycled-content obligations with targets from 2030 and higher targets later. [2][3]	PCR certificates, mass-balance evidence where permitted, supplier declarations.	Procurement / sustainability
Labelling and sorting information	Harmonised labelling is intended to improve consumer sorting and waste-collection consistency. [2][3]	Artwork control, material composition data, labelling approval records.	Marketing / regulatory / artwork
Reuse and refill	PPWR promotes reuse and refill systems and introduces obligations for selected sectors and formats. [2][3]	Reuse-system description, rotation data, hygiene or safety controls, customer instructions.	Operations / logistics
EPR and producer registration	Extended Producer Responsibility remains a key mechanism and is linked with packaging data reporting. [1][2]	Registration evidence, weights, material categories, market data.	EPR / finance / compliance

REQUIREMENT AREA	WHAT CHANGES	TYPICAL EVIDENCE	KEY FUNCTION
Declaration of conformity	Packaging compliance must be supported by EU conformity documentation and technical files. [1]	EU DoC, technical file, evidence matrix and approval history.	Regulatory / quality

5. Substance Restrictions and PFAS

PPWR includes substance-related provisions, including restrictions on certain hazardous substances in packaging and specific attention to PFAS in food-contact packaging. The European Commission states that the Regulation aims to reduce harmful PFAS forever chemicals in food-contact packaging. [2][3]

SUBSTANCE TOPIC	PACKAGING RELEVANCE	BUSINESS CHALLENGE	PREPARATION ACTION
Heavy metals and hazardous substances	Packaging components must comply with substance restrictions and composition requirements. [1]	Supplier declarations may not be complete at component level.	Collect material and component-level substance declarations.
PFAS in food-contact packaging	PFAS restrictions are particularly relevant to grease-resistant papers, coatings, barriers and food-service packaging. [2][3]	Alternative materials may affect barrier performance, food safety or recyclability.	Map PFAS risk, validate substitutes and obtain analytical evidence where needed.
Substances of concern and recyclability	Substances may affect safe recycling or recovered-material quality. [1]	Chemical compliance and recycling teams often work separately.	Integrate substance governance with design-for-recycling reviews.
Claims and material safety	PFAS-free, recyclable and food-contact claims must be supported by evidence.	Marketing claims can exceed available proof.	Create claim substantiation rules linked to technical files.

6. Regulatory Process and Secondary Legislation

PPWR sets the primary legal framework, but several operational details depend on delegated acts, implementing acts, harmonised standards and Member State interfaces for EPR and enforcement. Companies should therefore monitor both the main Regulation and secondary legislation. [1][2]

REGULATORY LAYER	WHAT HAPPENS	BUSINESS RELEVANCE	ACTION
Primary Regulation	Regulation (EU) 2025/40 establishes legal requirements and application timelines. [1]	Defines core duties and market-access conditions.	Map obligations by packaging family and market role.
Delegated acts	Commission may define detailed design-for-recycling, reuse-cycle and other technical criteria. [1]	Can materially change technical design thresholds.	Monitor drafts and engage through associations.
Implementing acts	Commission may define methodologies, labelling formats and reporting details. [1]	Affects data format, labelling and operational workflows.	Prepare flexible data and artwork processes.

REGULATORY LAYER	WHAT HAPPENS	BUSINESS RELEVANCE	ACTION
Harmonised standards	Standards may support technical demonstration of compliance. [1]	Testing and documentation expectations will become more standardised.	Participate in standards dialogue where strategically relevant.
Member State systems	EPR registration, reporting and enforcement remain operationally connected to national systems. [1][2]	Market access can depend on country-by-country registration and data.	Create EU market matrix and national compliance process.

7. Timeline and Business Impact

PPWR creates a staged compliance journey from 2025 to 2040. The exact timing of some duties depends on delegated and implementing acts, but the strategic direction is already clear: packaging must become lighter, more recyclable, better labelled, supported by recycled content where required and documented through technical files. [1][2]

PERIOD	REGULATORY DEVELOPMENT	IMPACT ON COMPANIES	RECOMMENDED ACTION
11 Feb 2025	PPWR entered into force. [2]	Preparation period begins and internal responsibility should be assigned.	Create PPWR governance and portfolio mapping.
12 Aug 2026	PPWR generally applies. [2]	Core obligations begin to apply across packaging placed on the EU market.	Complete packaging inventory, role mapping, EPR checks and technical-file templates.
2026-2028	Secondary legislation, labelling formats and design details develop. [1][2]	Packaging, artwork, supplier evidence and data systems must remain adaptable.	Track implementing acts and build flexible data architecture.
2028-2029	Labelling, reuse, refill and national/EPR interfaces become more operational. [1][2]	Artwork, packaging operations and customer communication require updates.	Implement labelling governance and reuse/refill feasibility assessments.
2030	Recyclability and recycled-content requirements become central policy milestones; Commission states all packaging should be recyclable in an economically viable way by 2030. [2][3]	Packaging that does not meet future recyclability requirements or lacks adequate supporting documentation may face increased compliance, commercial or market-access challenges	Redesign high-risk packaging and secure recycled-content supply.
2035	Recycling at scale and practical infrastructure performance become increasingly relevant. [1][2]	Packaging must align with real collection, sorting and recycling systems.	Validate packaging against actual recycling infrastructure and EPR fee impacts.
2040	Higher long-term recycled-content and waste-reduction ambitions tighten the business case. [1][2]	Material strategy and supplier contracts need long horizon planning.	Embed circular packaging strategy into portfolio and procurement planning.

TIMELINE PRINCIPLE

The 12 August 2026 application date is the start line, not the finish line. Strategic exposure increases toward 2030 and beyond, when recyclability, recycled content and real circular-economy performance become more decisive.

8. Advocacy and Stakeholder Engagement

Although PPWR has already been adopted, meaningful advocacy opportunities remain through secondary legislation, guidance, standards, EPR implementation, sector interpretation and practical enforcement. Companies should focus on evidence-based engagement rather than general lobbying. [1][2]

ADVOCACY LEVER	BEST TIMING	WHAT TO PROVIDE	STRATEGIC OBJECTIVE
Delegated and implementing acts	Before technical criteria are finalized.	Packaging data, feasibility analysis, cost impacts, testing evidence and unintended-consequence examples.	Contribute evidence and implementation experience that may support the development of technically feasible and proportionate regulatory requirements.
Standards development	During methodology and test-standard work.	Technical testing experience and sector-specific packaging realities.	Shape practical and reproducible compliance methods.
Industry associations	Continuously during implementation.	Shared sector evidence and common interpretation needs.	Avoid fragmented sector positions and support harmonised guidance.
National EPR dialogue	During national implementation interface development.	Data reporting burdens, fee modulation logic and registration challenges.	Improve operational clarity and reduce duplication.
Customer and supplier engagement	Before redesign decisions become urgent.	Joint packaging roadmaps and evidence requirements.	Align value-chain expectations and avoid duplicated testing.
Public affairs and sustainability coalitions	When circular-economy strategy and competitiveness issues are discussed.	Impact on innovation, SMEs, competitiveness and circular investment.	Position company as constructive implementation partner.

9. Packaging Data and Technical File Architecture

PPWR readiness depends on packaging-level evidence. Companies should create a standard technical file template for each packaging family and connect supplier evidence, material data, test reports, recyclability assessments and declarations of conformity.

TECHNICAL FILE LAYER	TYPICAL CONTENT	OWNER
Packaging identification	Packaging name, family, article number, supplier, market, product use and revision history.	Packaging / master data

TECHNICAL FILE LAYER	TYPICAL CONTENT	OWNER
Packaging specification	Drawings, dimensions, weights, material composition, components, closures, labels and coatings.	Packaging engineering
Supplier evidence	Material declarations, recycled-content certificates, substance declarations and test reports.	Procurement / supplier quality
Substance compliance	Heavy-metal status, PFAS mapping where relevant and substances-of-concern screening.	Regulatory / product stewardship
Recyclability assessment	Design-for-recycling review, recyclability grade or proxy assessment, sorting compatibility and material stream.	Sustainability / packaging
Minimisation rationale	Functional justification, benchmark comparison, safety, transport and product-protection rationale.	Packaging / logistics
Labelling and artwork	Material composition, sorting information, reuse/refill instructions and artwork approvals.	Artwork / marketing / regulatory
Declaration of conformity	EU DoC, responsible entity, approval, evidence matrix and sign-off history.	Regulatory / quality

BEST PRACTICE

Start with the top packaging families by EU volume and regulatory risk, such as plastic bottles, flexible packaging, food-contact paper, pails, drums, e-commerce mailers and transport packaging.

10. Enterprise Readiness Roadmap

PHASE	OBJECTIVE	KEY ACTIVITIES	OUTPUTS
1. Discover	Establish full visibility.	Map all packaging formats, materials, suppliers, markets, EPR registrations and product links.	Packaging inventory and PPWR exposure map.
2. Prioritize	Focus on material risk and volume.	Rank packaging by volume, recyclability risk, food-contact status, plastic content and redesign complexity.	Compliance heat map and priority list.
3. Build evidence	Create technical documentation.	Collect supplier declarations, specifications, recyclability evidence, substance data and recycled-content proof.	Technical file and evidence repository.
4. Redesign	Close compliance gaps.	Improve recyclability, reduce excess packaging, substitute restricted substances and secure recycled content.	Packaging redesign roadmap.
5. Deploy	Operationalise PPWR compliance.	Implement DoC process, artwork updates, EPR data flows, supplier clauses and change control.	Market-ready PPWR operating model.

PHASE	OBJECTIVE	KEY ACTIVITIES	OUTPUTS
6. Operate	Maintain continuous compliance.	Monitor delegated acts, supplier changes, packaging revisions, EPR rules and enforcement trends.	Compliance dashboard and board reporting.

11. Impact by Function and Packaging Family

AREA	PRIMARY IMPACT	RISK IF UNMANAGED	PRIORITY ACTION
Packaging development	Design-for-recycling, minimisation and material choices.	Late redesign and launch delays.	Integrate PPWR into design briefs and stage gates.
Procurement	Supplier evidence, recycled-content sourcing and material traceability.	Missing certificates and inability to prove compliance.	Add PPWR clauses and evidence templates to supplier contracts.
Sustainability	Circularity metrics, recycled content and waste prevention.	Inconsistent claims and weak ESG reporting.	Align PPWR data with sustainability reporting.
Regulatory / legal	DoC, technical files, market surveillance and role mapping.	Non-compliant packaging placed on the market.	Define accountability by legal entity and Member State.
Marketing / artwork	Labelling, sorting information and claims.	Artwork rework, misleading claims and market delays.	Create PPWR artwork governance.
Logistics / e-commerce	Empty space, transport packaging and reusable systems.	Excess packaging and cost exposure.	Optimise packaging dimensions and transport formats.
Finance / EPR	EPR registration, reporting, fee modulation and packaging data.	Fee increases and reporting errors.	Connect packaging BOM data to EPR reporting.

12. Board-Level Priorities

- Treat PPWR as a strategic market-access and circular packaging program, not only an EPR reporting issue.
- Establish executive ownership across packaging, regulatory, sustainability, procurement, logistics and finance.
- Build a complete EU packaging inventory and role map by legal entity and Member State.
- Create PPWR technical files for priority packaging families before 12 August 2026.
- Screen food-contact packaging for PFAS and other substance risks.
- Assess recyclability and redesign risk for all high-volume and high-risk packaging.
- Secure recycled-content supply chains for plastic packaging early.
- Integrate PPWR labelling and artwork rules into change-control processes.
- Align PPWR with ESPR, DPP, CSRD, customer requirements and product sustainability claims.
- Create a timeline dashboard covering 2026, 2028, 2030, 2035 and 2040 milestones.

13. Outlook and Conclusion

PPWR marks a decisive shift in EU packaging regulation. The regulation moves packaging compliance upstream into design, material selection, supplier qualification, technical documentation and data governance. It also connects packaging performance with circular economy expectations and market-access risk.

Companies that prepare early can reduce compliance disruption, avoid late-stage redesign costs, strengthen packaging data, improve supplier control and position recyclable, resource-efficient packaging as a competitive advantage. Companies that wait until obligations become fully operational may find that the hardest tasks, such as replacing restricted substances, proving recyclability or securing recycled-content supply, cannot be completed quickly.

FINAL MESSAGE

Effective PPWR preparation requires a structured approach to packaging governance, technical documentation, circular design, supplier transparency and data management throughout the product lifecycle

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Regulatory Strategy Consulting Kunz supports organizations in navigating complex regulatory landscapes and transforming compliance into a source of strategic value. The practice provides independent strategic advice, expert assessments and project-based support for organizations facing regulatory change, sustainability transformation and complex compliance challenges.

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