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Realizing Sustainable Packaging

THE NEXT ERA OF PACKAGING

pure INSIGHT™

Executive Summary

Sustainable packaging efforts are not new, but what is new is the level of access to packaging data and drivers for change, all of which are helping open new opportunities to shift to the next era, realizing sustainable packaging.

> States are implementing new packaging extended producer responsibility (EPR) laws. Compliance with these laws requires companies to uncover and report packaging data that most businesses have never organized before.

> With data transparency, companies can begin to see new opportunities for packaging improvements. There are some quick wins companies can implement.

> EPR laws are spurring new thinking beyond compliance, since there are incentives to shift to reusables and away from non-recyclable options, along with other improvements.

> There are signs of the shift in the market toward more sustainable innovation, which gives us an early view of what is coming next that companies can start to integrate into their approaches.

> **The new approach to realizing sustainable packaging requires a progression of design changes with three new Rs: refine, redesign, and reimagine.**

REFINE

REDESIGN

REIMAGINE

Packaging is facing a notable shift in sustainability expectations.

Early Era — Before

Sustainable packaging is a nice thing to do

- Voluntary programs
- Progress limited, more focused on leading organizations

LIMITED PROGRESS

EPR Era — Now

Greater visibility of opportunities

- New state-level regulations driving data collection
- Progress with quick wins due to better visibility of packaging data

QUICK WINS

Next Era — Future

Widespread innovation and packaging improvement

- Strategic approach to EPR fee optimization and sustainable packaging
- Extensive progress to **refine, redesign, and reimagine packaging**

REALIZING SUSTAINABLE PACKAGING

Introduction

Sustainable packaging was among the earliest corporate efforts in sustainability. Companies have been exploring ways to add recycled content, design for material efficiency, and other improvements longer than many other environmental and social projects.

This early start led to organized efforts since the 2000s. The Sustainable Packaging Coalition started in **2004**[1] and the first efforts on the Walmart Sustainable Packaging Scorecard, which engaged its large supplier base on the topic, were initiated in **2008**.

Twenty years later, sustainable packaging has remained largely a voluntary effort, and progress has been limited. However, momentum started to change when plastic pollution was spotlighted in popular media. For example, in 2015, a video of a turtle with a plastic straw in its nose **went viral**. This prompted renewed efforts to look at more sustainable solutions for plastic packaging. In 2018, the Ellen MacArthur Foundation launched a corporate engagement program, the **New Plastics Economy**. This brought global definitions and common aims to improve plastic packaging.

Notably, also in 2018, China stopped importing solid waste through its **"National Sword"** policy due to low-quality plastic waste streams being sent to China. This caused a significant disruption in U.S. recycling systems because, at the time, China was the top destination for plastic collected in the U.S. for recycling.

To date, progress on transitioning to sustainable packaging has remained limited. For example, the signatories to the New Plastics Economy improved packaging to be **reusable, recyclable, or compostable** from 63% in 2020 to just 70% in 2023. Key companies missed their 2025 goals and are reframing their sustainable packaging targets. Yet, these organizations are making **greater strides** than non-signatories.

[1] As a point of comparison, the Science Based Targets initiative for climate was launched in 2015.

2025 may present a new milestone with a shift to the EPR Era, which can open the way for the Next Era of sustainable packaging, with meaningful improvements and widespread sustainable packaging.

Summary View of Key Sustainable Packaging Milestones

2004	2008	2015	2018	2025
• Sustainable Packaging Coalition launched	• Walmart's first Sustainable Packaging Scorecard	• Spotlight on plastic in the media	• New Plastics Economy • China National Sword	• California, Colorado, and Oregon EPR laws require packaging data reporting • Oregon EPR fees invoiced

California's EPR High-level Goals by 2032

100%
of packaging in California is recyclable or compostable

25%
of plastic packaging is source-reduced

65%
of all single-use plastic packaging is recycled

Other EPR states have similar aims and also include targets for reusable packaging and recycled content, along with recycling rate improvement.

New Drivers

The key to the shift to more sustainable packaging in the U.S. is the new Extended Producer Responsibility (EPR) laws for packaging. While EPR in some form has long been employed, including bottle deposit programs and shopping bag bans, what is new is that a broad set of product packaging is in scope for the EPR state laws implemented in 2025, with some notable expectations and fees.

EPR is a policy tool that assigns producers a financial and/or operational responsibility for managing packaging after its use. The main purpose of these new laws is to **improve recycling rates**.

Under EPR, producers are the brands and companies that bring packaging to the market (with nuances in the various laws). These producers are required to provide services or funding, usually through a Producer Responsibility Organization (PRO), or a similar structure. PROs are non-governmental bodies that develop a state producer responsibility plan and manage producer responsibility programs to achieve the laws' aims.

The PRO then supports the development and execution of the needed operations, infrastructure, consumer education, and community engagement to advance the aims of the EPR programs.

A central feature of EPR programs is that producers must report the quantity of packaging they use within the state and subsequently pay fees based on that amount. The data requirements for EPR are new to most companies, which include the materials (aka covered materials) used and the weights of those materials. Further, there is a tangible cost, with inherent incentives in these EPR programs to transition to more sustainable packaging options.

Extended Producer Responsibility Overview

The first states to pass these laws have spurred quick action by companies to comply with the requirements, including Oregon, Colorado, California, Minnesota, and others. Plus, more states are passing these laws. With this growing momentum of EPR laws, companies must start considering a more strategic approach to sustainable packaging.

EPR era for sustainable packaging.
2025 was the first year of EPR law implementation in states in the U.S.

- Requires data transparency across the value chain
- Brings tangible costs through EPR fees
- Incentivizes sustainability improvements

In addition to EPR laws, there are related regulations emerging that support additional action in sustainable packaging. These include, but are not limited to the:

- European Union **Deforestation Regulation** (EUDR)
- European Union **Corporate Sustainability Reporting Directive** (CSRD)
- European Union **Packaging and Packaging Waste Regulation** (PPWR)
- State of California **climate corporate accountability laws**
- State of California **accurate recycling labels law**
- United Nations efforts to shape a **global plastics treaty**

These additional drivers extend beyond circularity and waste, encompassing broader nature and climate considerations such as deforestation, climate risk, and greenhouse gas emissions. In addition, human and environmental health are critical to more sustainable packaging, namely ensuring that no chemicals of concern are used, such as phthalates, bisphenols, and per and polyfluorinated alkyl substances.

The business case for advancing sustainable packaging goes beyond regulatory compliance and related fee incentives. Consumers are choosing sustainable packaging. For example, 90% of **survey respondents** in 2025 said they are more likely to purchase from a brand or retailer if its packaging is eco-friendly.

The Amazon Climate Pledge Friendly program, which identifies products with sustainable packaging among other sustainability attributes with a badge, is showing this play out. Brands displaying the badge typically realize a 12.5% **lift in sales** and a 10% spike in **page views**. More retailers are identifying sustainable packaging in their portfolio, like **Target** and **Ulta Beauty**.

According to **another global consumer 2025 survey**, recyclability is viewed as the most critical sustainability attribute, followed by recycled content. These attributes are aligned with EPR aims, so progress on advancing EPR connects directly to consumer interest.

New Opportunities

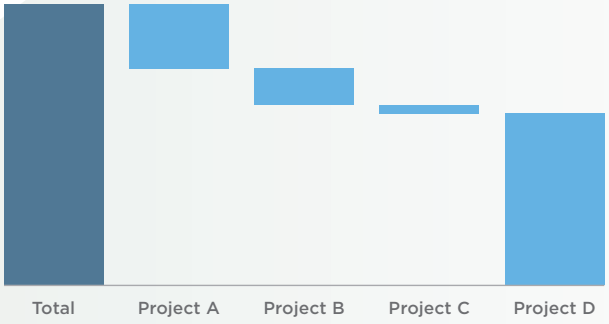
The emergence of EPR laws and their associated packaging data reporting requirements reveal new sustainable packaging opportunities. For example, companies can quickly see what packaging they are using and how much of it includes materials and formats that are not commonly recyclable.

This, paired with the incentives in EPR to improve packaging and consumer interest in these changes, expands opportunities to advance to more sustainable packaging.

The best ways to make the most of these opportunities are to establish clear aims, build a roadmap, and track progress. The aims may be to reduce EPR fee exposure, align with state-level EPR programs (e.g., California/Minnesota's EPR aims), and/or achieve corporate sustainability goals (e.g., responsibly sourced fiber).

Once the aims are established, a clear plan to make progress is needed: a sustainable packaging roadmap. This outlines which packages/products should be changed, a timeline for the work, and how the package/product changes contribute to the overarching aims.

Example roadmap excerpt



Next, it is important to track progress on the roadmap. This may mean that along with data on packaging materials (as is required by EPR), progress on key sustainable packaging metrics is also tracked, such as:

- Reusable
- Recyclable
- Compostable
- Recycled content
- Virgin plastic
- Total packaging
- Responsibly sourced fiber
- Greenhouse gas emissions from packaging
- Chemicals of concern and problematic materials

Key steps to shift from the EPR Era to the Next Era in Sustainable Packaging

New Solutions

The three Rs in waste management of reduce, reuse, and recycle are well-known. To get past the EPR Era, limited to quick wins, and on to the Next Era, companies need to implement widespread changes and innovative solutions. A progression of three new R's, related to design, will need to be employed: refine, redesign, and reimagine.

Early Era
Before

EPR Era
Now

Next Era
Future

REFINE

REDESIGN

REIMAGINE

REFINE

The first changes typically identified for a sustainable packaging roadmap are refinements in package designs. These may include lightweighting and component swaps.

Lightweighting and removing excess packaging are well-known approaches to reducing the environmental impacts of packaging, ensuring no compromises to the product quality or integrity. Reducing the overall weight of packaging can be done on the main package and each component.

For example, **Amcor and Bulldog** reduced flexible tube wall thickness by 16.67% to save approximately 8.5 metric tonnes of plastic annually.

Image source: **Bulldog**

Stonyfield Organic changed its pouch packages, which included, among other things, a reduction of material cap weight by 17%.

Component swaps are often needed to ensure a package design is compatible with recycling streams, such as changing coatings, colors, labels, and caps. While these may seem like smaller changes, they are critical to improve the value of the recycling system, reduce contamination, and increase the value of the recovered material.

For plastic, the **Association of Plastic Recyclers** provides clear guidance on the needed refinements in design, such as moving away from paper labels on plastic or metal caps on plastic, among other tweaks. **Kraft Heinz** worked with Berry Global to change the cap on its ketchup and sauce bottles, moving from traditional caps with multiple materials that complicate recycling, to caps made with a single type of recyclable plastic to support recycling.

REFINE EXAMPLE CHANGES
(NOT A COMPLETE LIST)

- Lightweighting and removing excess packaging
- Optimizing for recycling (e.g., improve coatings on paper packaging and improve color, labels, and caps on plastic packaging)
- Using recycled content and responsibly sourced materials
- Improving material health (e.g., removing chemicals of concern)

REDESIGN

The next level of sustainable packaging changes is new package designs, which may cover things such as moving to commonly recyclable materials for an existing format. These changes range from simple to complex, depending on the functionality needed in the materials.

For example, **General Mills** changed the wrapper used on its Nature Valley granola bars from multi-material versions without an existing recycling stream to polyethylene wrappers that can be recycled in Store Drop-Off programs.

Image source: **Nature Valley**

Carmex worked with Colbert Packaging to replace the plastic used in traditional blister-style packages with paperboard.

Sometimes, packaging is over-designed for the product, with more barriers or functional materials than really needed. It is worth ensuring that the packaging meets the actual requirements, while still effectively protecting the product.

REDESIGN EXAMPLE CHANGES
(NOT A COMPLETE LIST)

- Shifting to easy-to-separate materials
- Removing plastic without a format change (e.g., fiber blister)
- Moving to recyclable/potentially recyclable materials (e.g., polyethylene films)

REIMAGINE

The most complex design change is an innovation that reimagines the package. These may be substantial changes to the format, material, or product such as moving to reusable/refillable formats, using innovative materials, or changing the product to reimagine the packaging.

For example, **Dr. Bronner's** added a refill for its liquid castile soap line that is a fiber-based carton instead of a plastic bottle. This format was used **since** it "performed the best on every relevant ecological impact measure even when accounting for the recycling rates of each material, nationally."

Image source: **Dr. Bronner's**

Fiber-based packaging is a growing area of innovation. Sometimes it may require a format change (vs. a component change like the Carmex example earlier), such as **coffee in a fiber carton**. Material innovation in renewable materials ranges from tree-free fiber options to biobased plastics.

For example, **Apeel** offers a plant-based way to remove plastic packaging on produce. A shift to tree fibers and other renewable materials should ensure the use of responsible sources, such as certified pulp and paper or recycled content and by-products.

A more holistic approach is to evaluate if a change to the product would help transition to more sustainable packaging. This could range from product concentration to ingredient swaps to enable different packages. As an example, when **Method** changed from 2x to 8x concentrated laundry detergent, they realized a 36% reduction in plastic.

REIMAGINE EXAMPLE CHANGES
(NOT A COMPLETE LIST)

- Transitioning to reusable and refillable packages
- Removing plastic with a format change
- Utilizing innovative materials (e.g., biobased plastics)
- Implementing product changes (e.g., concentration)

The good news is there are examples across these actions (as noted with the examples provided), and innovation continues to make even more improvements possible.

Many of the examples provided in this report illustrate that brands work with suppliers to advance progress. So, this and other partnerships will be critical to progressing on sustainable packaging aims.

When **Stonyfield Organic** redesigned its yogurt pouches to be lightweighted and all polyethylene, the company worked closely with its supplier Cheer Pack and built relationships with other U.S. packaging providers. Stonyfield also engaged with the Association of Plastic Recyclers about this packaging change to ensure the effort aligns with best practices in design for recycling. The company also noted that coordination of internal stakeholders was a critical part of the process to launch the new package design.

Stonyfield Organic redesigned its popular pouch packaging.

Image source: **Stonyfield Organic**

A sustainable packaging roadmap may have some ups and downs with technology, cost, and timing (to name a few), as with most innovation pipelines. Therefore, a program-level view is important to keep in mind while working with internal stakeholders to manage expectations. Even if one project does not fulfill all the aims, the overall effort should be able to drive towards the packaging goals.

Enabling resources are also emerging to support EPR and innovation, including software tools, such as eHalo, Lorax, Trayak, etc. and certification programs including RePurpose Global, Association of Plastic Recyclers, etc.

Innovative packaging solutions are rapidly growing. Some areas with notable movement include, but are not limited to:

- Fiber-based containers
- Tree-free options
- Recyclable films
- Recyclable labels
- Reusable and refillable models

Summary — The Next Era

EPR is helping accelerate the transition to more sustainable packaging from the early efforts era of voluntary and limited progress. The increased access to data and connection to fees are key drivers for change, starting with quick wins. The EPR Era should be able to transition to the Next Era of sustainable packaging — an era that leverages EPR compliance and incentives, along with other drivers, to take actions to refine, redesign, and reimagine packaging.

Early Era
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REFINE

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REIMAGINE

There are additional resources available to support progress toward more sustainable packaging that Pure Strategies has helped create, such as the Food Industry Association (FMI) guides on **EPR** and **sustainable packaging** and the **Walmart Recycling Playbook**, among others.

Contact Pure Strategies for help to advance your sustainable packaging journey.
info@purestrategies.com

Appendix

Roadmap Development Guidance

Build a roadmap to reach EPR and sustainable packaging aims. At right is a short list of key actions typical in these efforts to help with developing the plan/roadmap. This is best used with EPR and other data to help prioritize efforts.

This is not intended to be a complete approach, rather a starting point.

For each aim, identify where there are opportunities to:

REFINE

- ◯ Lightweighting and removing excess packaging
- ◯ Optimizing for recycling (e.g., improve coatings on paper packaging and improve color, labels, and caps on plastic packaging)
- ◯ Using recycled content and responsibly sourced materials
- ◯ Improving material health (e.g., removing chemicals of concern)

REDESIGN

- ◯ Shifting to easy-to-separate materials
- ◯ Removing plastic without a format change (e.g., fiber blister)
- ◯ Moving to recyclable/potentially recyclable materials (e.g., polyethylene films)

REIMAGINE

- ◯ Transitioning to reusable and refillable packages
- ◯ Removing plastic with a format change
- ◯ Utilizing innovative materials (e.g., biobased plastics)
- ◯ Implementing product changes (e.g., concentration)