

ENHANCING THE SUSTAINABILITY OF PRODUCTS & PACKAGING

Given that “Reduce” is the first of the 3 R’s (Reduce, Reuse, Recycle) in the EPA Waste Management Hierarchy, it’s only logical for organizations to set packaging targets around the concept of weight reduction. While this is generally good practice, a problem arises when these goals lead to the unintended consequence of product damage or loss.

For example, many of the world’s largest and most environmentally conscious retailers and consumer goods producers have discovered that overly light weight/thin bottles can burst during shipment, wasting the far more valuable and ecologically sensitive products that they contain – water, fruit drinks, and other beverages. The same situation exists for expensive electronics equipment, where minimal additional packaging helps to ensure that a \$2000 television makes it to its final destination without damage to the product or the environment.

For reference, about 90% of the environmental impact of a product and its package is related to product manufacture and distribution, and only 10% is related to package production and material use (sources: INCPEN and *The Use Less Stuff Report*). Thus, a well-designed package maintains the product in its original condition, ready to be used as intended by the producer and expected by the consumer.

The best way to create a more sustainable package – one that delivers maximum value with minimum negative environmental, economic, and social impact – is to look at the big picture and ask the following:

1. What is the product or application that is being contained, protected, transported, sold, promoted, and ultimately used?
2. What is the functional, economic and social value of that product?
3. What role can packaging play in the delivery of maximum product value and use?
4. What are the economic, environmental and social costs associated with product breakage, spoilage, misuse, and non-use?
5. What is the best way to balance the requirement of delivering a pristine product with the goal of minimizing waste/excess packaging?

When it comes to the development of more sustainable packaging, this holistic, system-wide approach moves the discussion in a new direction – one of optimization. To enhance sustainability, an **optimal package** maximizes both the **effectiveness** needed to ensure that products are transported, displayed, purchased, stored, and used as intended; and the economic and environmental **efficiency** with which these functions occur.

From this perspective, a product goods company or retailer could set a packaging target such as: **Optimize packaging to maximize effectiveness related to product delivery and use; and efficiency related to economic and environmental resource consumption.**